RESEARCH REPORT

Examining risk and protective factors for the development of gambling-related harms and problems in Victorian LGBTIQ+ communities

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Conflict of interest declaration

The authors declare no conflict of interest in relation to this report or project.

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Examining risk and protective factors for the development of gambling-related harms and problems in Victorian LGBTIQ+ communities

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Note for the reader

Language and terminology

For this report, we have chosen to use the terms *LGBTIQ+*, *sexual and gender minorities*, and *cisgender and heterosexual (cishet)* community. Cisgender refers to "a person whose gender conforms to the dominant social expectations of the sex they were assigned at birth" (Waling, Lim, Dhalla, Lyons, & Bourne, 2019, p. 53). The researchers recognise the importance of terminology and all efforts have been made to use terminology that is appropriate and respectful. These terms were chosen in consultation with senior researchers in the LGBTIQ+ research field and are used by the organisations from which stakeholders were recruited. The researchers recognise that some terms are not accepted by all people or may not be appropriate in the future as accepted terminology changes. A glossary of terms can be found on page nine.

Grouping LGBTIQ+ respondents together during analysis

The researchers fully recognise that LGBTIQ+ communities are not a single homogenous community of people, but this is an umbrella term used to describe a wide range of people with diverse genders, sexes, and sexualities. Research in this area has increasingly focused on considering these diverse groups separately, as people of different genders and sexualities who have unique experiences (Price, 2011). For example, we know that bisexual and trans and gender diverse people have unique and different experiences to that of cisgender gay and lesbian people (Taylor, Power, & Smith, 2020; Vincent, 2018), and research has advocated for separate analyses of these groups so as to not homogenise their experiences as past research has done (Price, 2011; Vincent, 2018).

However, quantitative research requires a minimum number of people per group in order to be able to conduct appropriate statistical analyses (Tabachnick & Fidell, 2007). In this study's dataset, some groups consisted of a very small number of respondents; quantitative analyses could therefore not be conducted separately for these sexual and gender minority groups. If analyses were conducted on just the groups with enough respondents in them, respondents from the smaller groups would not have been included in the report, which would raise ethical concerns because they had spent their time responding to the survey to then not have their data included. As such, analyses compared sexual and gender minority respondents as a single group with cisgender and heterosexual respondents, due to the small numbers of respondents in some of the groups within the LGBTIQ+ sample. This approach has been adopted by other researchers in similar circumstances (Capistrant & Nakash, 2019; Drabble et al., 2018; Roxburgh, Lea, de Wit, & Degenhardt, 2016) and, in this instance, emerged following consultation with experienced LGBTIQ+ researchers and with Thorne Harbour Health, a LGBTIQ+ community health organisation. Furthermore, although the analyses compared the entire group of LGBTIQ+ participants with the cisgender and heterosexual group, the discussion of the findings in Chapter 5 examines some subgroup differences and acknowledges the varied experiences of this diverse community.

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Executive summary

There is a dearth of research examining the behaviour and perspectives of LGBTIQ+ communities in relation to gambling, including how these communities engage in gambling behaviour, develop gambling problems and gambling-related harms, and experience gambling support. To redress this gap in the literature, this project involved two separate studies: 1) a quantitative investigation of gambling behaviour, problem gambling severity, and gambling-related harms in LGBTIQ+ communities, as well as potential risk and protective factors for gambling problems and harms; and 2) a qualitative pilot exploration of the lived experiences of LGBTIQ+ people in relation to how they engage in gambling behaviour, make sense of gambling experiences, and experience gambling-related help services.

Study One

Background

LGBTIQ+ people are often exposed to stressful social environments dominated by experiences of stigma, discrimination and prejudice. Consequently, it is not surprising that studies have found LGBTIQ+ people are at heightened risk of experiencing anxiety, depression, and substance misuse. Although research in the general population has established that anxiety, depression, and alcohol and drug problems tend to co-occur with problem gambling, we know very little about the types of gambling and the experience of problem gambling and gambling-related harm in LGBTIQ+ communities. Furthermore, while a limited number of studies have examined potential risk factors for problem gambling in LGBTIQ+ communities, they were limited for several reasons: 1) they used small sample sizes which meant some analyses were underpowered, 2) they did not include a cishet comparison group, 3) they did not examine potential protective factors, and/or 4) they did not examine gambling-related harms. Given that problem gambling can result in considerable harm to the individual, their family, and the broader community, it is critical to understand the nature and severity of problem gambling and related harms in LGBTIQ+ communities compared to cishet communities, and to examine the risk and protective factors specifically associated with this population.

Aims

The primary aims of this research were:

1. To examine the relationship between LGBTIQ+ status and gambling behaviour (participation, frequency, expenditure), problem gambling severity, and gambling-related harm.
2. To examine the degree to which LGBTIQ+ status moderated the relationship between psychosocial factors (gambling-related cognitions, gambling expectancies, the influence of peer norms, hazardous drinking, drug use, impulsivity, resilience, depression, anxiety, social support, community connectedness, and minority stress) and problem gambling severity/gambling-related harm.
3. To examine the degree to which minority stress (perceived discrimination and stigma) was associated with problem gambling severity and related harms in LGBTIQ+ communities.

In the course of this study, the following aims were also explored:

1. The degree to which potential risk factors (gambling-related cognitions, gambling expectancies, the influence of peer norms, hazardous drinking, drug use, impulsivity, depression, anxiety, and minority stress) individually and uniquely predicted problem gambling severity and related harms in the cishet group and the LGBTIQ+ group.
2. The degree to which potential protective factors (resilience, social support, and community connectedness) individually and uniquely predicted problem gambling severity and related harms in the cishet group and the LGBTIQ+ group.

Method

Study One consisted of an online survey which collected demographic information, information about gender and sexuality (including identity, attraction and behaviour), gambling participation, frequency and expenditure, problem gambling severity, gambling-related harm, potential risk factors (including erroneous cognitions, gambling expectancies, peer norms, hazardous alcohol use, drug use, impulsivity, psychological distress, and minority stress), and potential protective factors (including resilience, social support, and community connectedness). All survey measures were completed by 385 participants (living in Australia, aged 18 years and over) which included 213 cishet people (mean age = 26.5 years), and 172 LGBTIQ+ people (mean age = 26.8 years).

Results

The key findings are presented here, with greater detail and statistical data reported in the results. Compared with the cishet participants, the LGBTIQ+ participants reported statistically significantly:

- Lower levels of problem gambling
- Fewer gambling-related harms
- Lower levels of erroneous gambling cognitions
- Less positive and negative gambling expectancies
- Fewer friends who gambled
- Lower levels of hazardous drinking
- Higher levels of psychological distress
- Higher levels of impulsivity
- Lower levels of resilience
- Lower levels of social support.

Gambling participation and behaviour

Statistical comparisons in gambling activities between the cishet and LGBTIQ+ participants revealed:

- A significantly greater proportion of cishet participants in this study participated in pokies/electronic gaming machines, casino table games, horse racing/greyhounds, sports betting, and keno. LGBTIQ+ participants were more likely to participate in instant scratch tickets and keno. The same pattern of results were identified for gambling frequency.

- Similarly, cishet participants in this study had higher gambling expenditures on pokies/electronic gaming machines, casino table games, horse racing/greyhounds, sports betting, keno and instant scratch tickets. LGBTIQ+ participants spent higher amounts of money on bingo.
- Cishet participants in this study reported higher scores on problem gambling severity using the Problem Gambling Severity Index (PGSI) and gambling-related harm using the Short Gambling Harms Scale. Compared with the cishet participants, the LGBTIQ+ participants were significantly more likely to be classified in the non-problem gambling category (28.5 per cent vs 13.2 per cent) using the PGSI and significantly less likely to be classified in the problem gambling category (27.9 per cent vs 39.4 per cent).

Risk factors

Analysis of the potential risk factors revealed that in both participant groups, higher PGSI scores (problem gambling severity) were predicted by higher levels of erroneous gambling cognitions and negative gambling expectancies; and higher Short Gambling Harm Screen (SGHS) scores were predicted by higher levels of negative gambling expectancies. Analyses examining which risk factors were more pronounced among LGBTIQ+ participants than cishet participants revealed:

- Interaction analyses showed that LGBTIQ+ status moderated the relationship between psychological distress and PGSI scores and SGHS scores. A simple slope analysis revealed that psychological distress was a significantly more pronounced risk factor for PGSI scores among the cishet group with more psychological distress predicting higher PGSI scores. The simple slope analysis for psychological distress and SGHS scores was significant for both participant groups, however, psychological distress was a stronger predictor of SGHS scores among the cishet participants.
- LGBTIQ+ status was found to moderate the relationship between the cognitive distortion of inability to stop gambling and PGSI scores for both participant groups. Simple slope analyses showed it was a more pronounced risk factor for PGSI scores among the LGBTIQ+ group compared to the cishet group, with greater inability to stop gambling beliefs predicting problem gambling severity.
- The relationship between positive gambling expectancies and PGSI scores and SGHS scores was found to be moderated by LGBTIQ+ status as indicated by a significant interaction. Simple slope analyses showed that for both PGSI scores and SGHS scores, positive gambling expectancies was more pronounced among the LGBTIQ+ participants compared with the cishet participants, with more positive expectancies predicting problem gambling severity and related harms in the LGBTIQ+ group.

Protective factors

Among the LGBTIQ+ participants, greater social support was significantly associated with lower levels of problem gambling severity (PGSI scores) and lower levels of gambling-related harms (SGHS scores).

Implications of the study

Potential implications from this study included suggestions for preventative efforts to reduce problem gambling severity and related harms. This may involve:

- Educating and increasing awareness about the risks associated with gambling.

- Addressing the harms associated with gambling to reduce stereotypes and stigmatise people who do gamble. While acknowledging that problem gambling and gambling-related harms are overlapping, but not synonymous, constructs, a focus of gambling-related harm in health promotion campaigns may be particularly important for people in LGBTIQ+ communities as they experience stigmatisation and marginalisation and may be less likely to seek support or acknowledge their gambling as result.

Limitations

First, the study employed convenience sampling and the cishet group was almost exclusively cishet men as very few cishet women volunteered to complete the survey. This likely had an impact on the outcomes as research has found cishet men gamble more frequently, spend more than cishet women, and report higher rates of gambling-related problems. Second, the cross-sectional nature of this study meant the current study was unable to examine antecedent risk and protective factors that develop over time. Third, this study does not include the experiences of people with intersex variations as there were only three people with intersex variations that volunteered.

Conclusions

This study has contributed new information about problem gambling in LGBTIQ+ communities, which can be used as a comparative benchmark for future research. It has extended the scope of previous research by also examining gambling-related harms and protective factors in addition to risk factors. Although they generally displayed lower levels of gambling behaviour, problem gambling severity and harms, approximately 28 per cent of LGBTIQ+ participants were classified as problem gamblers and 68 per cent of this group experienced a range of gambling-related harms. Higher levels of erroneous cognitions about gambling (such as, “it is difficult to stop gambling once starting”) and more negative expectancies about gambling (such as, “I feel ashamed of myself”) were found to significantly increase their risk for problem gambling and/or experience gambling-related harms. Importantly, having more social support was negatively associated with problem gambling and related harms suggesting it might play a “protective role”. Studies employing representative samples are required to compare the gambling behaviour of cishet and LGBTIQ+ samples and longitudinal research is required to definitively identify risk and protective factors for LGBTIQ+ communities.

Study Two

Background

Understanding the lived experiences of gambling in LGBTIQ+ communities through in-depth interviews is critical. Yet, surprisingly no Australian or international study adopting qualitative methodology has examined the lived experiences of LGBTIQ+ people who gamble. Therefore, this pilot exploratory study aimed to address this gap in the literature by interviewing LGBTIQ+ people who gamble in addition to interviewing key stakeholders from community health services and gambling support services to understand their experiences with gambling and their experiences with accessing gambling support.

Aim

The overall aim was to understand the lived experiences of LGBTIQ+ people in relation to gambling behaviour, pathways to gambling and their views regarding support for gambling.

Research questions

1. How might LGBTIQ+ people characterise or understand their engagement with gambling practices?
2. How might experiences of discrimination, prejudice, stigma and/or harassment intersect with gambling experiences of LGBTIQ+ people?
3. Why might a LGBTIQ+ person choose, or not choose, to access services for potential concerns with their gambling practices, and what factors influence these decisions?

Method

Study Two used a descriptive exploratory qualitative approach (Polit & Beck, 2009). This approach allowed for a naturalistic inquiry of the lived experiences of the participants and for the findings to be presented in comprehensive summaries which can inform future research. As such, Study Two involved interviewing 11 LGBTIQ+ participants to garner their experiences of gambling, previous help-seeking behaviour, and to what extent, if any, they believed their sexual and/or gender identity was associated with their gambling behaviour. Five key stakeholders from LGBTIQ+ community health services and general gambling support services were also interviewed to further explore the nature and consequences of gambling within LGBTIQ+ communities from their perspectives as health workers and service providers. The semi-structured interviews were conducted over the telephone and were audio-recorded and transcribed verbatim for analysis.

Results

The integrated findings from the LGBTIQ+ respondents and relevant key stakeholders revealed three key topics which will be discussed below: 1) the different ways LGBTIQ+ people engage with gambling, 2) the variable pathways to gambling, and 3) the difficulties experienced when accessing support services.

Engagement with gambling

The interview participants all engaged in gambling and the majority described engaging in recreational gambling behaviour such as attending electronic gaming machine (EGM) venues and buying Lotto tickets. Interviewees indicated that those who socialise in groups within LGBTIQ+ venues tend to be less likely to gamble in general as these venues do not contain EGMs. In contrast, LGBTIQ+ people who are more likely to visit venues on their own will typically visit EGM venues as they are open late and are deemed to be "safe spaces". This was consistent with feedback from the key stakeholders who stated that their LGBTIQ+ identified clients attend EGM venues to combat loneliness, isolation, and feelings of grief and loss.

Pathways to gambling

Five pathways related to gambling emerged from the interview discussions: 1) accessibility of gambling, 2) emotional affect, 3) psychological distress, 4) coping mechanisms, and 5) control. These pathways highlighted several key points.

- Some people within the LGBTIQ+ communities reported finding gambling to be less accessible and/or deliberately avoided gambling due to the heteronormative themes and images in gambling advertisements.
- Some participants initially used gambling to avoid dealing with their LGBTIQ+ status or to avoid the stress of coming out. Their current gambling was also linked to stress relief as it provided an outlet to unwind and relax.
- Many of the participants had a history of addiction and mental health issues. These issues tended to be discussed more readily than their involvement with gambling. While for some participants, these additional issues increased their risk for gambling, other participants reported that it increased their awareness of their risk for addiction and unhealthy behaviours, and therefore, they were more cautious about their gambling.
- A small group of participants spoke about gambling due to boredom or to experience an endorphin rush whilst others talked about psychological distress and negative mood leading to them seeking out gambling and/or other addictive behaviours (i.e., alcohol).
- Some participants gambled to relax and escape stress related to their sexual and/or gender identity.

Access to support

Although none of the interviewed participants had accessed a gambling support service, they were able to provide feedback on their experiences with accessing mental health and social support services. A few participants spoke about the tendency for some mental health professionals and social support workers to focus on or pathologise their sexuality and/or gender identity when they did not feel like it needed to be discussed. Several participants reported that mental health professionals need to be better educated on LGBTIQ+ issues and appropriate language to use as they often have to educate the mental health professional themselves.

Implications of the study

Potential implications from this study included the need for a multi-level approach to effectively produce changes in gambling in LGBTIQ+ communities. This may involve:

- Educating and increasing awareness in the healthcare sector and among mental health professionals and social support services of the intersection between gambling, sexual and gender identity, and gambling-related issues in LGBTIQ+ communities.

- Including campaigns that focus on supporting LGBTIQ+ communities. This includes messaging that is representative of diverse genders and sexualities, such as having advertisements and campaigns that feature diverse queer people, couples and families, and address issues which are relevant to LGBTIQ+ communities such as stress related to coming out.

Limitations

First, the findings may not be representative of LGBTIQ+ people who have a problem with gambling as only two participants were classified as problem gamblers and one was classified as a moderate-risk gambler. Second, the majority of participants were from the state of Victoria which has a high level of LGBTIQ+ acceptance in metropolitan Melbourne and some regional areas. This means that participants may have had more access to LGBTIQ+ safe spaces that do not intersect with gambling spaces. Third, as with Study One, this study does not include the experiences of people with intersex variations as no people with intersex variations volunteered to complete an interview. Fourth, although gambling support counsellors were interviewed, none of the LGBTIQ+ participants had experience with accessing a gambling support service. While their feedback on mental health services could be applied to gambling support services, further research is needed regarding the LGBTIQ+ experiences of gambling services.

Conclusions

All LGBTIQ+ interviewees gambled with an approximate third being classified in the problem gambling range. The findings of this pilot study indicated the many pathways that may lead to a LGBTIQ+ person gambling; stress, negative mood, psychological distress and hence a means of coping with these emotions. Interestingly, some participants pointed out that due to heteronormative marketing gambling spaces, many did not seek out gambling venues. None of the participants had sought help from gambling services and unfortunately it is possible that their reported negative experiences of mental health and other support services may have been a barrier for them with respect to gambling support. Finally, the findings highlighted the need for continued training and education programs among gambling support services as the counsellors in those services felt it was intrusive to ask about their client's sexual orientation and gender identity. It is possible that this might mean they will use incorrect pronouns or make heteronormative assumptions which may create barriers in the therapeutic relationship or deter clients from returning.

Abbreviations

Acronym	Description
AUDIT-C	The Alcohol Use Disorders Identification Test – Consumption
Cishet	Cisgender and heterosexual
EGMs	Electronic gaming machines. Also known as poker machines, pokies, or slots.
GEQ	The Gambling Expectancy Questionnaire
GRCS	The Gambling Related Cognitions Scale
K6	6-item Kessler Psychological Distress Scale
LGBTIQ+	Lesbian, gay, bisexual, trans, intersex, queer, and plus which includes other gender identities (e.g. non-gender binary) and sexual orientations (e.g. pansexual). Variations of this (e.g. LGBTI, LGBTIQ+, LGBT, LGB) appear throughout this report when citing previous studies as it is the terminology used by the original researchers.
PGSI	The Problem Gambling Severity Index
PLS	Perceptions of Local Stigma Scale
SGHS	The Short Gambling Harms Screen
TGD	Trans and gender diverse.

Glossary of terms

The definitions provided below were developed by GLHV@ARCSHS, La Trobe University (2016). The Rainbow Tick guide to LGBTI-inclusive practice. Prepared by Pamela Kennedy, Melbourne: La Trobe University. Some terms have been updated by Waling, Lim, Dhalla, Lyons, and Bourne (2019) and are directly quoted from pages 53-58 of their report.

Term	Definitions
Agender	"Is a term which can be literally translated as "without gender". It can be seen either as a non-binary gender identity or as a statement of not having a gender identity."
Asexual	"Asexuality is the lack of sexual attraction to others, or low or absent interest in or desire for sexual activity. It may be considered the lack of a sexual orientation, or one of the variations thereof, alongside heterosexuality, homosexuality and bisexuality among others."
Bisexual	"A person who is sexually and/or emotionally attracted to people of more than one sex. Often this term is shortened to 'bi'."
Cisgender	"Cisgender describes a person whose gender conforms to the dominant social expectations of the sex they were assigned at birth."
Gay	"A person whose primary emotional and sexual attraction is toward people of the same sex. The term is most commonly applied to men, although some women use this term"
Gender diverse	"A broad term that encompasses a diversity of gender identities and gender expressions including: bigender, trans, transgender, genderqueer, gender fluid, gender questioning, gender diverse, agender and non-binary. Gender diverse refers to identities and expressions that reject the belief that gender is determined by the sex someone is assigned at birth."
Gender identity	"Gender identity has a specific meaning under State and Commonwealth Equal Opportunity and anti-discrimination legislation. In broad terms, however, it refers to a person's deeply felt sense of being a man or a woman, both, neither, or in between. For example, an individual who has no gender identity or a gender identity that is neutral may refer to themselves as agender or gender free. Some people's gender identity may vary according to where they are and who they are with."
Heteronormativity and heterosexism	"Heteronormativity is the belief that everyone is, or should be, heterosexual and cisgender and that other sexualities or gender identities are unhealthy, unnatural and a threat to society. Heterosexism describes a social system built on heteronormative beliefs, values and practices in which non-heteronormative sexualities and gender identities and people with intersex variations are subject to systemic discrimination and abuse. For example, assuming that someone is heterosexual, and that they are in a monogamous, married relationships can be understood as heteronormative."
Intersex	"Intersex people are born with physical sex characteristics that don't fit medical and social norms for female or male bodies. These include a diverse range of genetic, chromosomal, anatomic and hormonal variations. Intersex is understood as a political, embodied identity, and intersex people can have a range of gender identities and sexual orientations."
Lesbian	"A woman whose primary emotional and sexual attraction is toward other women."
Non-binary	"Non-binary refers to a model of the relationships between sex and gender that does not assume a radical division between sex (a person is either male or female but not both or neither) and gender (a person is masculine or feminine but not both or either). People who are non-binary may have sex characteristics that do not fit a binary model of male or female or may express their gender in ways that do not match the dominant social expectations of the sex they were assigned at birth."
Pansexual	"Term used to describe people who have romantic, sexual or affectional desire for people of all/multiple genders and sexes."

Term	Definitions
Queer	"Queer is often used as an umbrella term that includes non-heteronormative gender identities and sexual orientations. The term has also been used as a critique of identity categories that some people experience as restrictive and limiting. For some older LGBTI[Q+] people the term is tied to a history of abuse and may be offensive."
Sexual orientation	"Describes a person's sexual or emotional attraction to another person based on that other person's sex and/or gender. The term is restricted in law to sex only and refers to attraction to persons of: the same sex (gay and lesbian); different sex (heterosexual); or persons of both the same and different sex (bisexual). Pansexual is a term that is used to describe someone who is sexually and emotionally attracted to other people regardless of their sex, gender or gender identity."
Trans/Transgender	"A person whose gender identity or expression is different from that assigned at birth or those who sit outside the gender binary. The terms male-to-female and female-to-male may be used to refer to individuals who are undergoing or have undergone a process of gender affirmation. Transgender and trans* are older terms and may now be seen as less inclusive than trans and gender diverse. Terms that may be used now include trans man/trans masculine/trans male, and trans woman/trans feminine/trans female among others."

Ethical considerations in LGBTIQ+ research

Researching involving LGBTIQ+ communities requires a number of ethical considerations. The study included the participation of LGBTIQ+ established organisations in the state of Victoria, Australia. Thorne Harbour Health, an LGBTIQ+ community health organisation, was consulted for the duration of the project. This ensured that the research, from design, to ethics, to research recruitment, to analysis of the data and write up of the findings, was conducted with support and guidance from leading Victorian-based LGBTIQ+ organisations. This is important, as historically, LGBTIQ+ people may have faced harm from treatment and representation in research studies (see Roffee & Waling, 2017).

Additionally, LGBTIQ+ research can often subsume gender within sexuality, rendering invisible the unique experiences of trans and gender diverse people (Vincent, 2018), as well as people with non-monosexualities (i.e. bisexuality or pansexuality; Taylor et al., 2020). The researchers were careful not to interpret the findings of the study through a biased lens and two members of the research team are experts in the field who ensured each step of the study was conducted ethically without heterosexist bias or discriminatory language. Ethics was obtained from the host institution (Deakin University; ref: 2018-366) as well as Thorne Harbour Health (ref: THH/CREP/19/002), which provides an ethical review to ensure research is appropriate and supports LGBTIQ+ communities as developed by long-standing LGBTIQ+ community members.

Other measures included rephrasing the online survey where necessary to remove heteronormative or gender-specific language, and the final survey items were independently reviewed by a member of the research team who specialises in LGBTIQ+ research (Waling), and by Thorne Harbour Health. The language used in advertisements, the online survey, and during the interviews was checked to ensure it was up-to-date with appropriate LGBTIQ+ terminology, and did not engage in heteronormative, homonormative, or transnormative practices, or engage in discriminatory practices.

Additionally, the positionality of the Principal Researcher (Bush) also needs to be considered when conducting interviews (Qin, 2016). As a heterosexual and cisgender woman, the Principal Researcher was an ‘outsider’, however, she did not disclose her sexual orientation or gender identity during the interviews. People from minority population groups, such as LGBTIQ+, may feel more or less comfortable with speaking with a researcher who is not a fellow peer. This level of comfort is entirely dependent on whether a LGBTIQ+ person is concerned by being outed or known to the person they are speaking with since it is a relatively small community. Some LGBTIQ+ people do not want to talk to other LGBTIQ+ people about these issues and topics for fear of being known (this is particularly true of those experiencing domestic violence). Conversely, a LGBTIQ+ person may feel less comfortable speaking with someone who identifies as heterosexual, due to longstanding experiences of violence, hostility, and discrimination by heterosexual people. As such, by not disclosing her status, the researcher maintained an ambiguous identity that could be interpreted by the interviewee and worked to reduce power dynamics within the interview. The researcher was of course willing to disclose her status if asked. Nonetheless, the researcher was mindful of being sensitive and reflective of her impact on participants. This meant that the researcher was mindful of the language that was used and was careful not to make any heteronormative assumptions.

The researchers were also mindful of the sensitive nature regarding the topics of sexual orientation, gender identity, and gambling. The field of psychology has historically pathologised sexual minority groups and attributed issues, such as mental illness and addiction, to minority sexual orientations and gender identities (Blair, 2016). Indeed, these are already sensitive topics that can be difficult to discuss due to fears of stigma and judgement (Koh, Kang, & Usherwood, 2014). The researcher conducting the qualitative interviews (Bush) needed to overcome this potential barrier by making participants feel safe and comfortable. To achieve this, she did not avoid discussing the participant’s sexual orientation and/or gender identity, and did not judge or stigmatise participants when

discussing their gambling or other sensitive issues. Furthermore, she used the language that participants used to describe their own sexual orientation, gender identity, and gambling. If a participant expressed embarrassment or discomfort, the researcher reminded the participant that it was a safe space, that the interview was confidential, and that the participant did not have to discuss anything that caused discomfort.

Participant anonymity and confidentiality

People who are sexually and/or gender diverse are typically socially marginalised and experience negative treatment in the form of heterosexism, homophobia, discrimination and stigmatisation (Meyer, 2003). Some people who disclose their sexual orientation and/or gender identity in research are not 'out' (meaning, they have not acknowledged their sexual identity, gender identity or intersex status with other people). For those who are out, LGBTIQ+ communities are small, which can raise concerns regarding privacy. As such, it was important to protect the anonymity, confidentiality, and privacy of the participants in this study so they felt safe to share personal information without fear of being identified.

As such, all interview data was de-identified and coded to ensure participant anonymity, and it was treated as confidential and private. When conducting the interviews, all participants were allocated a unique identification number and their names were redacted from the interview transcripts. Additionally, pseudonyms were used in the reporting of the interview findings and any identifying information was removed. Participants were made aware of this at the start of the study to help them to feel comfortable with sharing their experiences.

General introduction

Problem gambling and related harms

An estimated 69 per cent of adults in Victoria have engaged in some form of gambling (Rockloff, Greer, Fay, & Evans, 2011). Some of these individuals gamble as a recreational activity (Birch, Ireland, Strickland, & Kolstee, 2015). Yet, for a small minority, it can become problematic and can result in gambling-related harms. The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5; American Psychiatric Association, 2013) defined gambling disorder as "persistent and recurrent problematic gambling behaviour in a 12-month period which leads to substantial impairment or distress" (p. 585). In contrast, many jurisdictions, including Australia, have adopted a public health framework in which gambling problems are viewed across a risk continuum, with no-risk gambling at one end being characterised by an absence of adverse gambling-related harm, and problem gambling on the other end being characterised by severe harms (Neal, Delfabbro, & O'Neil, 2005). The Australian national definition of problem gambling, which is "difficulties in limiting money and/or time spent on gambling which leads to adverse consequences for the gambler, others, or for the community", reflects this continuum of risk (Neal et al., 2005, p. i). Problem gambling is a serious public health concern given recent Victorian estimates of approximately 0.7 per cent of adults being classified as problem gamblers, 2.4 per cent as moderate-risk gamblers and 6.7 per cent as low-risk gamblers (Rockloff et al., 2020).

Problem gambling has serious implications for the gambler, families, and the community (Lorains, Cowlishaw, & Thomas, 2011; Shaffer & Hall, 2001). The harms that can be experienced as a result of problem gambling can be varied. They include impaired relationships, financial problems and legal issues (Dowling, Rodda, Lubman, & Jackson, 2014; Langham et al., 2016), and co-morbid diagnoses such as depression, anxiety and substance use (Dowling et al., 2015; Lorains et al., 2011). Recent Victorian evidence suggests that the burden of harm resulting from gambling-related problems is of a level approximately two-thirds that of alcohol abuse/dependence and major depressive disorders (Browne, Greer, Rawat, & Rockloff, 2017). However, harms from gambling are not restricted to high-risk gamblers as there is evidence that 85 per cent of this burden of harm stems from low- and moderate-risk gamblers, resulting from their greater prevalence in the population (Browne et al., 2016). Although this approach has attracted some criticism (Delfabbro & King, 2019), these findings highlight that the harm from low- and moderate-risk gambling accumulates at a population-level.

Problem gambling in LGBTIQ+ communities

Problem gambling and related harms have been examined in various sub-populations, including cisgender and heterosexual (cishet) men and women (Chalmers & Willoughby, 2006; Dixon et al., 2016; Dowling, 2009, 2013; Liu et al., 2013; Parke, Griffiths, Pattinson, & Keatley, 2018). However, the focus has rarely extended beyond binary cisgender categories and diverse sexual orientations have seldom been the focus of attention. Lesbian, gay, bisexual, transgender, intersex, queer, and other gender and sexually diverse (LGBTIQ+) communities have been found to be more at-risk of engaging in some high-risk behaviours such as hazardous alcohol consumption (Roxburgh et al., 2016). An Australian population-level survey, *2013 National Drug Strategy and Household Survey*, revealed that when compared to heterosexual individuals (*n* = 23,855), lesbian, gay, and bisexual individuals (*n* = 579) reported higher levels of past year drug and alcohol use (Roxburgh et al., 2016). For example, LGB[1] women were twice as likely to report hazardous drinking, three times as likely to report daily drinking, and almost

1 As this is drawn from the literature, the terminology used by the original researchers has been used. This means that there may be variations of LGBTI, LGBTIQ+, LGBT, LGB etc.

four times as likely to report past year drug use compared with heterosexual women; and gay and bisexual men were twice as likely to report past year drug use compared with heterosexual men (Roxburgh et al., 2016). Another Australian 2011 population-level survey, *Private Lives 2*, found up to 17 per cent more past year drug use among LGBT respondents (*n* = 3,911) compared with national averages taken from the *2010 National Drug Strategy and Household Survey* (n = 26,648; Leonard, Lyons, & Bariola, 2015). Furthermore, four times as many LGBT individuals reported using ecstasy and meth/amphetamine, and more than three times as many LGBT individuals reported using cocaine and hallucinogens (Leonard et al., 2015). Given their higher risk for hazardous alcohol and drug use due to living in a stressful social environment and experiences of discrimination and violence, it is of interest as to whether this population is also at-risk for gambling at problematic levels and/or experiencing gambling-related harms. Yet, few studies have examined problem gambling or harms among LGBTIQ+ individuals (Hershberger & Bogaert, 2005; Richard et al., 2019; Rider, McMorris, Gower, Coleman, & Eisenberg, 2018).

Recently, Rider, McMorris, Gower, Coleman, and Eisenberg (2018) compared the prevalence of gambling participation and problem gambling among transgender and gender diverse (TGD) adolescents with cisgender adolescents. The Brief Adolescent Gambling Screen (BAGS) was used to screen participants with a cut-off score four and over indicating problem gambling. A population-based sample of 80,929 students (2.7 per cent TGD, 97.3 per cent cisgender; mean age = 15.5 years) was included in the study (Rider et al., 2018). While a similar proportion of cisgender and TGD participants were found to report any gambling behaviour in the past 12 months (29.6 per cent TGD and 31.7 per cent cisgender), significantly more TGD participants (5.7 per cent) than cisgender (1.8 per cent) scored above the cut-off for problem gambling on the BAGS (Rider et al., 2018). Moreover, TGD participants assigned male at birth appeared to be most at risk for problem gambling as they scored at least two or three times higher than TGD participants assigned female at birth, cisgender men, and cisgender women (Rider et al., 2018). Thus, consistent with research examining gender differences in gambling (Dowling et al., 2017), men were more likely to engage in problem gambling, particularly if they were TGD.

Two other studies have examined differences in gambling frequency and problem gambling severity between sexual minority and heterosexual groups. First, Hershberger and Bogaert (2005) compared differences in current gambling frequency among sexual minority and heterosexual individuals using case histories recorded by the Kinsey Institute for Sex Research. Gambling frequency was measured using a single item with one follow-up item: 1) “Do you gamble on cards, races, or any game?”; if the answer was yes, 2) “In terms of money, would you call yourself a light, moderate, or heavy gambler?” Participant responses were combined into one item which described their current frequency of gambling, which was categorised as none, rare, little, some and much. The sample of case studies included 5,122 cisgender men (18.3 per cent sexual minority) and 5,476 cisgender women (5.0 per cent sexual minority). A significantly greater proportion of sexual minority participants (6.0 per cent) were found to engage in some gambling than heterosexual participants (1.6 per cent; Hershberger & Bogaert, 2005). These findings, however, should be interpreted with caution as the authors conducted secondary analyses on data collected between 1938 to 1963; moreover, gambling frequency was measured using a subjective non-validated single item that did not include a timeframe. Second, a more recent study by Richard et al. (2019) compared differences in problem gambling severity between sexual minority (*n* = 779) and heterosexual (*n* = 18,520) American student-athletes. The researchers found a significantly higher number of gambling disorder symptoms (as measured by DSM-5 criteria) among all sexual minority participants (except for those who identified as lesbian) than heterosexual participants (Richard et al., 2019).

The few studies which have been conducted to date suggest that sexual and gender diverse individuals are potentially more at-risk of increased gambling participation, gambling frequency, and problem gambling than cishet individuals. Moreover, TGD individuals assigned male at birth have been found to have the greatest risk for problem gambling. However, none of these studies were conducted in Australia and more research is needed to better understand these differences.

The current study

There is a dearth of research examining the behaviour and perspectives of LGBTIQ+ communities in relation to gambling, including how these communities engage in gambling behaviour, develop gambling problems and gambling-related harms, and experience gambling support. To redress this gap in the literature, this project involved two separate studies: 1) a quantitative investigation of gambling behaviour, problem gambling severity, and gambling-related harms in LGBTIQ+ communities, as well as potential risk and protective factors for gambling problems and harms; and 2) a qualitative pilot exploration of the lived experiences of LGBTIQ+ people in relation to how they engage in gambling behavior, make sense of gambling experiences, and experience gambling-related help services.

Study One: Examination of the potential risk and protective factors for developing problem gambling and gambling-related harms

Background

Risk factors associated with problem gambling severity in LGBTIQ+ communities

Risk factors are defined as antecedent variables or predictors that are associated with a greater risk for the development of problem gambling (Coie et al., 1993; Kazdin, Kraemer, Kessler, Kupfer, & Offord, 1997; Loxley et al., 2004). An expanded definition is an antecedent condition that can predict problem gambling after adjusting for other known risk factors (Loxley et al., 2004). To date, only two cross-sectional studies have examined correlates of problem gambling severity using LGBTIQ+ participants (Birch et al., 2015; Grant & Potenza, 2006). First, an American study by Grant and Potenza (2006) examined sexual orientation and clinical correlates of gambling in a sample of 105 men (mean age = 46 years) who met the DSM-IV criteria for problem gambling, 79.0 per cent of whom were heterosexual, 14.3 per cent who identified as gay, and 6.7 per cent who identified as bisexual. Compared with the heterosexual male participants, gay and bisexual male problem gamblers were more likely to suffer from current impulse control disorders (68.2 per cent versus 34.9 per cent) and substance use disorders (59.1 per cent versus 31.3 per cent) likely due to living in a stressful social environment created by discriminatory and prejudicial attitudes.

Second, an Australian study by Birch and colleagues (2015) examined gambling and mental health in New South Wales LGBTI communities. The sample of 69 participants (mean age = 36.5 years) included individuals who identified as men (63.8 per cent), women (30.4 per cent), transgender (2.9 per cent), and gender queer (2.9 per cent; Birch et al., 2015). The survey revealed problem gamblers (n = 14) and non-problem gamblers (n = 55) did not significantly differ in terms of depression and anxiety, but that problem gamblers reported higher levels of alcohol and drug use, and lower self-control (Birch et al., 2015). Although the two groups did not significantly differ on mental health variables, there was a trend for higher depression and anxiety among problem gamblers which the authors believed may have reached significance with a larger sample.

These two studies demonstrated associations between problem gambling severity in LGBTIQ+ communities and impulse control, alcohol use and drug use, and potential associations with depression and anxiety. This is consistent with research which has demonstrated higher levels of alcohol use (J. N. Fish, Hughes, & Russell, 2017; Hughes, Szalacha, & McNair, 2010; Roxburgh et al., 2016), drug use (R. Brown, McNair, Szalacha, Livingston, & Hughes, 2015; Hughes et al., 2010; Roxburgh et al., 2016), and mental health problems (Gonzales & Henning-Smith, 2017; Hughes et al., 2010) among LGBTIQ+ people when compared to people from the cishet population. These findings are also consistent with the gambling literature involving cishet populations as the most commonly referenced comorbidities of problem gambling severity are depression, anxiety, impulse control disorders, and problematic alcohol and other drug use (Dowling et al., 2015; Lorains et al., 2011). Depression and alcohol and other drug use are also longitudinally associated with the subsequent development of gambling problems (Dowling et al., 2017).

In addition to these risk factors, gambling research using cishet populations has also identified several other factors that likely place individuals at greater risk for problem gambling. First, higher levels of distorted gambling cognitions, in which the individual tends to overestimate their chances of winning, have been reported by problem gamblers compared to non-problem gamblers (Emond & Marmurek, 2010; Myrseth, Brunborg, & Eidem, 2010). Second, gambling expectancies have been found to be predictive of problem gambling, with negative outcome expectancies, such as an expectation to feel bad, demonstrating a particularly strong association with gambling severity (St-Pierre, Temcheff, Gupta, Derevensky, & Paskus, 2014; Wickwire, Whelan, & Meyers, 2010). Third, greater misperceptions of peer gambling norms have been reported by problem gamblers than non-problem gamblers (Raisamo & Lintonen, 2012). Although these risk factors have not been explored among LGBTIQ+ individuals, they have been found to significantly predict gambling among cishet populations and therefore warrant attention in the current study.

Minority stress theory has also been helpful in understanding why sexual and gender minority populations may be at greater risk for some health issues, such as problematic alcohol and drug use, depression, and anxiety (R. Brown et al., 2015; Hughes et al., 2010; Hughes, Wilsnack, & Kristjanson, 2015; Reisner, Falb, Wagenen, Grasso, & Bradford, 2013; Roxburgh et al., 2016). According to minority stress theory, health disparities in sexual and gender minority populations can be attributed to living in a stressful social environment created by stigma, discrimination, and prejudice (Chakraborty, McManus, Brugha, Bebbington, & King, 2011; Condit, Kitaji, Drabble, & Trocki, 2011b; Meyer, 2003). That is, the unique and socially-based stress that is experienced by sexual and gender minority populations places them at a greater risk of poorer health outcomes as these stressors are experienced in addition to those experienced by cishet communities and require an extra level of adaptive effort (Meyer, 2003).

While gambling research involving sexual and gender minority populations is scarce, minority stress theory suggests gender and/or sexually diverse individuals may: 1) have a greater risk for problem gambling; 2) have a heightened experience of the risk factors for problem gambling that have been observed in cishet populations; and 3) experience a set of additional risk factors due to their minority status. Similar outcomes have been found in other research examining, for example, alcohol and drug use in LGBTIQ+ communities (Hughes et al., 2015; Roxburgh et al., 2016). The current study therefore examined perceived stigma and discrimination to see if experiences of minority stress increased the risk for gambling among LGBTIQ+ individuals.

Protective factors associated with problem gambling severity in LGBTIQ+ communities

The limited number of studies that have focused on problem gambling in LGBTIQ+ communities have examined factors which increase the likelihood of someone engaging in problem gambling behaviour. To date, this research has not been extended to include protective factors which are often defined as antecedent factors that are associated with a reduced risk of subsequent problem gambling, regardless of being exposed to risk factors (Coie et al., 1993; Farrington & Ttofi, 2011). Protective factors can have a negative main effect with problem gambling severity (Coie et al., 1993; Dickson, Derevensky, & Gupta, 2008; Lussier, Derevensky, Gupta, & Vitaro, 2014). Extensive research among cishet populations has identified several factors which may play a protective role, including resilience, social support and social bonding (or community connectedness; Dowling et al., 2017; Dowling & Oldenhof, 2017; Johansson, Grant, Won Kim, Odlaug, & Götestam, 2009). While we do not yet know whether these factors will also be protective for LGBTIQ+ individuals, there is literature which suggests they may play a role.

Resilience has been examined in LGBTIQ+ communities as an important protective factor as individuals who are more resilient are able to withstand stress and adversity (Meyer, 2015). Resilience has been defined as an individual's ability to adapt and thrive in adverse or stressful circumstances (Masten, Best, & Garmezy, 1990; Meyer, 2015). Thus LGBTIQ+ people with higher levels of resiliency are able to cope in healthy ways as they can adapt in the face of adversity instead of using unhealthy coping mechanisms, such as alcohol or drugs (B. M.

Gillespie, Chaboyer, & Wallis, 2007; Meyer, 2015). In light of this, it is possible that resilience may also protect LGBTIQ+ individuals from problem gambling behaviour and subsequent harms.

Two other potentially protective factors are LGBTIQ+ community connectedness and social support. For some, involvement in LGBTIQ+ communities means visiting LGBTIQ+ friendly bars or clubs, attending events hosted by LGBTIQ+ organisations, and/or engaging with LGBTIQ+ social media (Feinstein, Dyar, London, & Feinstein, 2017). This type of connection provides individuals with positive and affirming social connections (Rosario, Hunter, Maguen, Gwadz, & Smith, 2001), and attending events can foster feelings of safety, community support and comfort (Condit et al., 2011b; Gruskin, Byrne, Kools, & Altschuler, 2007). Without social support, individuals are more vulnerable to poor health outcomes, such as depression and drug use, particularly when combined with other stressors typically experienced by LGBTIQ+ individuals, such as negative reactions to self-disclosure of sexual orientation (Rothman, Sullivan, Keyes, & Boehmer, 2012). Therefore, the positive impact that community connectedness and social support have on LGBTIQ+ individuals' wellbeing suggests these factors may reduce the likelihood of engaging in problem gambling behaviour.

Significance of this study

There is limited research available investigating problem gambling in LGBTIQ+ communities and the correlates of problem gambling severity among LGBTIQ+ individuals both within Victoria and beyond. The available research suggests that LGBTIQ+ problem gamblers are likely to have low self-control, use alcohol and drugs at risky levels, and potentially also suffer from depression and/or anxiety (Birch et al., 2015; Grant & Potenza, 2006). Yet, these studies used relatively small sample sizes, and they lacked comparison groups of cishet participants (Birch et al., 2015) or non-problem gamblers (Grant & Potenza, 2006). Moreover, they examined a limited range of risk factors, restricted their analyses to the individual-level factors without considering the role of relationship-, community-, or societal-level factors (Dahlberg & Krug, 2002; Dowling et al., 2017), and did not explore the role of protective factors in the development of gambling problems in LGBTIQ+ communities (Dowling et al., 2017). Finally, they focused on gambling problems without extending their findings to gambling-related harms. While the findings from these studies were consistent with what has been found in cishet populations (Dowling et al., 2017), it is clear that further research is required in order to identify and understand the factors that increase risk and protect against problem gambling and gambling-related harms in these communities.

Methodology

Study design

This study employed a quantitative methodology using an online survey. Ethics approval was obtained from the Deakin University Human Research Ethics Committee (reference number: 2017-077; approval letter is attached in Appendix A), and the Thorne Harbour Health Community Research Endorsement Panel (reference number: THH/CREP/19/002; approval letter is attached in Appendix A).

Aims

This was the first study to examine gambling problems and related harms in Victorian LGBTIQ+ communities. The primary aims of this research were:

1. To examine the relationship between LGBTIQ+ status and gambling behaviour (participation, frequency, expenditure), problem gambling severity, and gambling-related harm.
2. To examine the degree to which LGBTIQ+ status moderated the relationship between psychosocial factors (gambling-related cognitions, gambling expectancies, the influence of peer norms, hazardous drinking, drug use, impulsivity, resilience, depression, anxiety, social support, community connectedness, and minority stress) and problem gambling severity/gambling-related harm.
3. To examine the degree to which minority stress (perceived discrimination and stigma) was associated with problem gambling severity and related harms in LGBTIQ+ communities.

In the course of this study, the following aims were also explored:

1. The degree to which potential risk factors (gambling-related cognitions, gambling expectancies, the influence of peer norms, hazardous drinking, drug use, impulsivity, depression, anxiety, and minority stress) individually and uniquely predicted problem gambling severity and related harms in the cishet group and the LGBTIQ+ group.
2. The degree to which potential protective factors (resilience, social support, and community connectedness) individually and uniquely predicted problem gambling severity and related harms in the cishet group and the LGBTIQ+ group.

Hypotheses

1. LGBTIQ+ participants will have significantly higher levels of problem gambling severity (as measured by the Problem Gambling Severity Index [PGSI]), more gambling-related harms (as measured by the Short Gambling Harms Screen [SGHS]), have higher levels of gambling participation, gamble more frequently, and spend less money compared with the cishet group.
2. In both groups of participants, higher PGSI scores and SGHS scores will be predicted by higher scores for each potential risk factor (erroneous gambling cognitions, gambling expectancies, peer norms, alcohol and drug use, psychological distress, and impulsivity; plus perceived stigma and discrimination for the LGBTIQ+ participants).
3. The relationship between potential risk factors and PGSI scores/SGHS scores will be more pronounced among LGBTIQ+ participants than cishet participants.
4. In both groups of participants, lower PGSI scores and SGHS scores will be predicted by higher scores for each potential protective factor (resilience, social support, and community connectedness).
5. The relationship between potential protective factors and PGSI scores/SGHS scores will be less pronounced among LGBTIQ+ participants than cishet participants.

Recruitment

Recruitment commenced February 28, 2019 and ended November 30, 2019 using convenience sampling. Survey participants were recruited from three sources with an over-sampling of LGBTIQ+ individuals: 1) State- and Australia-wide LGBTIQ+ and cishet community and social networks; 2) public common areas, such as restrooms and community noticeboards; and 3) prominent LGBTIQ+ organisations, such as Thorne Harbour Health, and

prominent mainstream gambling support services. This involved displaying posters and flyers in health clinics, gambler's support services and public common areas; community groups were asked to advertise the study through email network, website and/or social media channels; and advertisements were posted through Facebook. See Appendices B and C for copies of the posters and flyers.

Data collection

All study advertisements included a link for an online survey hosted on the *Qualtrics* survey platform (see Appendix D for the survey instrument). The home page of the survey provided detailed information about the study, what participation involved, that responses would be private and confidential, that LGBTIQ+ identified participants would be invited to be interviewed and what the interviews would involve (see Appendix D). It was a requirement to indicate consent by checking a box before proceeding to the survey. At the start of the survey, participants were given the option of going into a draw to win one of six $50 retail vouchers (approval was received by the Deakin University Human Research Ethics Committee). To do so, they were asked to enter their email address and were informed that eligibility to enter the draw was dependent on completing the survey.

All data was de-identified and coded to ensure participant anonymity. Participant identification numbers and contact information were kept in separate password-protected files. Only the Principal Researcher (Bush) had access to secured information.

Eligibility criteria

Participants were required to be currently living in Australia, aged 18 years or older, and have engaged in gambling. In the online survey, if participants indicated that they lived outside of Australia or were aged under 18 years, they were automatically directed to the end of the survey and thanked for their interest in the study.

Measures

Demographic information

Demographic information: Standard demographic questions were included in the online survey, such as, age, country of birth, indigeneity, residential location, education, and occupational status (see Appendix D pages 117-120).

Gender identity and sexuality

Gender identity: Participants were asked, "Which of the following best describes your gender identity? Please select all that apply" with response options: male, female, transgender female/transgender woman, transgender male, transgender man, non-binary/gender fluid, agender, other (please describe). Participants were also asked, "What gender were you assigned at birth (i.e. what was specified on your original birth certificate)?" with male and female as response options. Intersex status was collected by asking "Were you born with a variation of sex characteristics? (this is sometimes called 'intersex')" with response options of yes, no, prefer not to answer.

Sexuality: Participants answered questions about their sexual identity, attraction, and behaviour. To measure identity, participants were asked, "Do you consider yourself to be" with the following response options: lesbian, gay, bisexual, queer, pansexual, asexual, heterosexual/straight, other (please specify). To measure attraction, participants were asked, "Which of the following best describes who you are sexually attracted to? (Please select all that apply)" with the following response options: women, men, non-binary/gender fluid individuals, different

identity (please specify). To measure behaviour, participants were asked about their relationship status: "Are you currently in a relationship?" with response options yes with one person, yes with more than one person, no. Those in a relationship with one person were asked, "Are you in a relationship with:" and were provided with the following response options: a woman, a man, a transgender woman, a transgender man, non-binary individual, other (please specify). Participants who were in a relationship with more than one person were asked to type in the gender identities and sexual orientations of their partners.

Gambling participation, frequency and expenditure

Questions about participation and frequency of gambling were modelled from the Victorian Prevalence Survey 2014 (Hare, 2015) and questions on expenditure where modelled from the Social and Economic Impact Study of Gambling in Tasmania (The Allen Consulting Group, The Social Research Centre, The University of Melbourne, & Monash University, 2011). The survey included a list of 10 types of gambling activities and participants answered yes or no to which they had spent money on in the past 12 months: informal private games for money; playing pokies or EGMs; betting on casino table games; betting on horse or harness racing or greyhounds; betting on sports; betting on events; Keno; Lotto, Powerball or the Pools; scratch tickets; and Bingo. Participants then answered questions about where they engaged in each gambling activity, how often they participated in the past 12 months and the average amount of money they had spent during each gambling session in the past 12 months (calculated using the difference between what participants took with them and what they had left at the end).

Gambling behaviour

The Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001): The PGSI was employed to measure problem gambling severity using nine items framed in the last year that are answered on a four-point Likert scale ranging from zero (never) to three (almost always). Scores range from 0–27 and indicate four categories of symptom severity: non-problem gambling (0), low-risk gambling (1–2), moderate-risk gambling (3–7), and problem gambling (8 or more). Good internal consistency has been demonstrated (Ferris & Wynne, 2001; Holtgraves, 2008). Cronbach's alpha was .94 for the current sample which indicated excellent internal reliability.

The Short Gambling Harms Screen (SGHS; Browne, Goodwin, & Rockloff, 2018): This 10-item measure asks yes/no questions about gambling harms in the past year. Scores greater than zero (i.e. one or more items endorsed) indicate a presence of gambling-related harms, with higher scores indicating more harm. The SGHS has demonstrated very strong reliability (Browne et al., 2018). Cronbach's alpha was .90 for the current sample, which indicated excellent internal reliability.

Risk factors

The Gambling Related Cognition Scale (GRCS; Raylu & Oei, 2004): The GRCS was employed to measure erroneous gambling cognitions using 23 items which are answered on a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). The scale produces a total score and five subscales: Gambling expectancies (for example, "Gambling makes me happier"); Illusion of control (for example, "Praying helps me win"); Predictive control (for example, "When I have a win once, I will definitely win again"); Inability to stop gambling (for example, "I will never be able to stop gambling"); and Interpretive bias (for example, "Relating my losses to probability makes me continue gambling"). Higher scores indicate more erroneous gambling cognitions. Good psychometric properties have demonstrated that this is a useful tool for identifying erroneous gambling cognitions among non-clinical gamblers (Raylu & Oei, 2004). Cronbach's alpha for the total score and the five subscales, respectively, were .92, .71, .75, .75, .90, and .78 for the current sample, which indicated good to excellent internal reliability.

The Gambling Expectancy Questionnaire (GEQ; M. Gillespie, Derevensky, & Gupta, 2007): The GEQ consists of 23 items which asked participants the likelihood of each outcome (for example, "I enjoy myself" and " I stop being bored") when they are gambling which are answered on a seven-point Likert-type scale ranging from one (no chance) to seven (certain to happen). The scale consists of three subscales measuring positive expectancy (enjoyment/arousal, self-enhancement, and money) and two subscales measuring negative expectancy (overinvolvement, emotional impact). In the current study, the three positive expectancy scales and the two negative expectancy scales were combined so that a positive expectancy score and a negative expectancy score was used for analysis. Higher scores indicate a higher level of expectancies about gambling. This scale has been found to have strong validity and adequate to good internal reliability (M. Gillespie et al., 2007). Cronbach's alphas were .88 and .91 for the positive and negative scales respectively for the current sample, which indicated excellent internal reliability.

The Favorable Attitudes Toward Drug Use section of the International Youth Development Study (IYDS; Eisenberg, Toumbourou, Catalano, & Hemphill, 2014): Peer norms were measured using a modified single item from the IYDS. The original item measured friends' use of drugs and asked, "In the past year (12 months), how many of your best friends have smoked cigarettes?" In the current study, we asked about friends' gambling and substituted the term 'best friends' with 'close friends': "In the past year (12 months), how many of your close friends have gambled?"

The Alcohol Use Disorders Identification Test – Consumption (AUDIT-C; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001): The AUDIT-C was employed to measure severity of alcohol use with higher scores indicating a greater severity of alcohol use. This three-item scale is a shortened version of the 10-item AUDIT with items answered on differing four-point Likert scales. The AUDIT-C is sometimes interpreted with cut-offs for male and female respondents. Given the diverse nature of gender in the LGBTIQ+ sample, however, only raw scores were considered for analysis. The AUDIT-C has been found to be a valid and reliable measure for assessing problem drinking (Rumpf, Wohlert, Freyer-Adam, Grothues, & Bischof, 2013). Cronbach's alpha was .71 for the current sample, which indicated acceptable internal reliability.

Drug use (P. C. Smith, Schmidt, Allensworth-Davies, & Saitz, 2010): A single screening question asked, "How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?" This item has been found to accurately identify drug use (P. C. Smith et al., 2010).

The (Negative) Urgency subscale of the UPPS-P Impulsive Behaviour Scale (UPPS-P; Lynam, Smith, Whiteside, & Cyders, 2006): This subscale measured an individual's tendency to behave impulsively when experiencing negative emotions with high scores indicating difficulty with resisting temptations. There were 12 items which were answered on a 4-point Likert scale ranging from one (strongly agree) to four (disagree strongly). For example, "I always keep my feelings under control." Evidence of the validity of this scale has been found in various populations (Cyders & Smith, 2007; Cyders et al., 2007). Cronbach's alpha was .93 for the current sample, which indicated excellent internal reliability.

The 6-item Kessler Psychological Distress Scale (K6; Kessler et al., 2003): The K6 measured past 30-day mental illness with high scores indicating more psychology distress. Items were measured on a five-point Likert scale ranging from one (all of the time) to five (none of the time). The reliability and validity of this shortened scale has been demonstrated in various populations, such as adolescents, and adults with co-occurring substance use disorders (Mewton et al., 2016; Swartz & Lurigio, 2006). Cronbach's alpha was .90 for the current sample, which indicated excellent internal reliability.

Two indicators of minority stress were measured:

Perceptions of Local Stigma Scale (PLS; Herek & Glunt, 1995): The PLS includes seven items which were answered on a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree), with a high score

indicating a greater level of perceived stigma. This measure was modified to refer to "where I live" instead of "the Sacramento area", and used the term "LGBTIQ+" in place of "gay/bisexual man" (for example, "Most people where I live feel that identifying as LGBTIQ+ is a sign of personal failure"). Good reliability has been found for this scale (Herek & Glunt, 1995). In the current study, reliability was also good as indicated by a Cronbach's alpha of .88.

Experiences of discrimination (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009): A yes/no question was adapted for the current study to measure experiences of discrimination. The original question asks, "Sometimes people feel they are discriminated against or treated badly by other people. In the past 12 months, have you felt discriminated against because someone thought you were gay, lesbian, or bisexual?" However, this study asked, "Sometimes people feel they are discriminated against or treated badly by other people. In the past 12 months, have you felt discriminated against because of your sexual and/or gender identity?" The question was modified so it could be administered to the whole LGBTIQ+ sample. It was answered using a five-point Likert scale ranging from zero (not at all) to four (very much).

Protective factors

The Brief Resilience Scale (BRS; B. W. Smith et al., 2008): This six-item scale assesses the ability to recover from stress with items answered on a five-point Likert scale ranging from one (strongly disagree) to five (strongly agree). Items one, three, and five are positively worded (for example, "I tend to bounce back quickly after hard times"), and items two, four, and six are negatively worded and reverse coded for scoring (for example, "I have a hard time making it through stressful events"). A high score indicates a greater level of resilience. Strong internal reliability has been demonstrated for the BRS (B. W. Smith et al., 2008). Cronbach's alpha was .86 for the current sample, which indicated good internal reliability.

The Medical Outcomes Study Social Support Survey (MOS-SS; Sherbourne & Stewart, 1991): The MOS-SS contains 19 items which asked how often each type of support was available if needed. Items were answered on a five-point Likert scale ranging from one (none of the time) to five (all of the time) with questions that related to emotional/informational support ("Someone whose advice you really want"), tangible support ("Someone to take you to the doctor if you needed it"), affectionate support ("Someone who hugs you"), and positive social interaction ("Someone to have a good time with"). A high score indicates higher levels of social support. Excellent internal reliability has been demonstrated for the total score (Sherbourne & Stewart, 1991). Cronbach's alpha was .97 for the current sample's total score, which indicated excellent internal reliability.

Connectedness to the LGBT Community Scale (Frost & Meyer, 2012): The current study used a modified version of this scale which referred to LGBTIQ+ communities in general rather than LGBTI communities in New York. A modified version that was used in the Rainbow Women's Help-Seeking Study was also included to measure connectedness to mainstream communities (McNair & Bush, 2016). Both scales consist of seven items answered on a four-point Likert scale ranging from one (strongly disagree) to four (strongly agree) with higher scores indicating a greater level of connectedness to the LGBTIQ+ and/or mainstream community, for example, "You feel a bond with the LGBTIQ+/mainstream community" and "Participating in the LGBTIQ+/mainstream community is a positive thing for you." Good internal reliability has been demonstrated for the LGBTIQ+ and mainstream versions in an Australian sample of sexual minority women (McNair & Bush, 2016). In the current sample, Cronbach's alpha scores of .90 and .87 indicated excellent and good internal reliability for the LGBTIQ+ community connectedness and the mainstream community connectedness scales.

Analysis

Prior to analysis, the quantitative data was screened following the process outlined by Pallant (2011). This involved screening the dataset for accuracy, for example, inspecting univariate descriptive statistics for out-of-range values and ensuring self-reported values, such as gambling expenditure and drug use, were entered correctly; checking

the distributions of variables; and identifying outliers and missing data. There was a small amount of missing data which was imputed using simple mean imputation (Jakobsen, Gluud, Wetterslev, & Winkel, 2017). If more than 40 per cent of items were missing in a scale, the participant was excluded from analysis (Jakobsen et al., 2017). Due to a high frequency of non-numerical responses entered for the question regarding drug use, this variable was recoded with categorical responses: never, at least once a year but less than monthly, at least monthly but less than weekly, and at least weekly. Furthermore, due to the sensitive nature of this item, missing data was not imputed as it would be difficult to make assumptions about their drug use.

Another data cleaning issue to note relates to an error in the administration of the AUDIT-C scale. A skip pattern had not been administered in the online survey so 13 participants who had answered "never" to question one did not provide a response to question two. Also, 12 other participants who answered "never" to question one provided an anomalous response of "one or two" to question two and one participant also answered "10 or more" to question two. However, it has been recommended that when the AUDIT-C is administered without a skip pattern, a "zero drinks" option is typically inserted for question two (K. Bush et al., 1998). Therefore, all participants who answered "never" to question one had their responses recoded or inserted as "0 drinks" for question two.

Tests of normality included conducting Kolmogorov-Smirnov tests, inspecting skewness statistics, and visually inspecting histograms. The PGSI and SGHS scales were both non-normal and so they were log (+1) transformed to reduce the skewness (see Appendix E for before-and-after skewness statistics). However, only the log transformed PGSI values were used for multivariate analyses as the use of log transformed SGHS values did not make a difference to the outcomes. Boxplots and *z* scores indicated the presence of outliers for three scales. All outliers were trimmed to the next lowest or highest score as per the recommendations of Tabachnick and Fidell (2007).

Participant characteristics were compared between the cishet group and the LGBTIQ+ group using Chi-square or Fisher's exact tests for categorical variables, and *t*-tests or Mann-Whitney tests for numerical variables, with an alpha level of $p < .05$.

Although we were interested in examining risk and protective factors specifically in Victorian LGBTIQ+ communities, the sample size from Victoria was not large enough to perform robust regression analyses. Nonetheless, we believe that the results using the entire sample can be generalised to Victorian LGBTIQ+ communities as the Victorian LGBTIQ+ participants' PGSI scores and SGHS scores did not significantly differ from the other LGBTIQ+ participants' scores (see Appendix E).

Two separate independent samples *t*-tests were performed to examine the relationship between LGBTIQ+ status and PGSI scores and SGHS scores. Chi-square tests were run to examine differences in gambling participation, and Mann-Whitney tests were performed to examine differences in gambling frequency and expenditure between the cishet group and the LGBTIQ+ group.

To determine which potential risk factors predicted higher PGSI scores and higher SGHS scores, two hierarchical multiple regression analyses were performed for the cishet group of participants and for the LGBTIQ+ group of participants. Due to a high incidence of missing data (14.8 per cent) and an inability to impute answers due to the nature of the question, drug use was excluded from these analyses. A series of correlations were performed in the first instance to determine 1) whether each risk factor was significantly associated with PGSI scores and SGHS scores among the cishet participants and then the LGBTIQ+ participants; and 2) whether there were issues of multicollinearity. Based on significant correlations with PGSI scores and SGHS scores and after accounting for issues of multicollinearity, the variables included in the cishet group's regression models were age (as a covariate), erroneous gambling cognitions, negative gambling expectancies, alcohol use, psychological distress, and impulsivity. The LGBTIQ+ group's regression model for PGSI scores included age (as a covariate), erroneous gambling cognitions, positive gambling expectancies, negative gambling expectancies, alcohol use, and impulsivity; and the regression model for SGHS scores contained the same variables plus psychological

distress. After running the regression models for the cishet group of participants and then the LGBTIQ+ group of participants, the Mahalanobis distances were inspected to determine if there were any multivariate outliers. Outliers were detected in the cishet group's and LGBTIQ+ group's regression models, however, removal did not improve the models and therefore, the participants were retained for analysis.

These analyses and steps were repeated for the potential protective factors. That is, two hierarchical multiple regression analyses were performed for the cishet group of participants and for the LGBTIQ+ group of participants to determine which potential protective factors predicted lower PGSI scores and lower SGHS scores. The cishet group's regression models included age (as a covariate), resilience, and social support, and the LGBTIQ+ group's regression models included age (as a covariate) and social support. Again, multivariate outliers were detected in the cishet group's regression models, however, removal did not improve the models and therefore, the participants were retained for analysis. It is important to note that age was controlled for but not gender as several participants identified with more than one gender.

Lastly, a series of moderation analyses was performed using multivariate regression to examine the degree to which LGBTIQ+ status moderated the relationship between each potential risk and protective factor, and PGSI scores/SGHS scores. Simple slope analyses were conducted for predictors that had a significant interaction with LGBTIQ+ status to examine whether the predictor was more pronounced among the cishet group or the LGBTIQ+ group.

Sample size calculations

An *a priori* power analysis was conducted to determine the required sample size based on the most complex model that was planned to run. Based on a medium effect size (f^2 = .15) based on previous research (see review Dowling et al., 2017), power of .08 and alpha of .05, a model with seven predictors in it, and three of interest, G*Power (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007) calculated a required total sample size of 77. Because this analysis was run separately for each group (cishet, LGBTIQ+), this meant 77 was required for each group. Our sample size of 213 cishet and 172 LGBTIQ+ respondents exceeded these sample size requirements.

Results

Participant characteristics

Eight hundred and eighteen eligible participants who lived in Australia and were aged 18 years and older started the survey. Of these, 401 participants completed all measures and were retained for analysis. However, four of these participants revealed significant amounts of missing data on one or more scales and were therefore excluded from analysis as per the protocol recommended by Jakobsen and colleagues (2017). Furthermore, there was evidence of straight-lining (i.e. selecting the same response through all scales) for one participant, who was removed from analysis as the pattern of spending in the gambling expenditure items did not seem to be plausible and retaining them may have biased the results. Finally, 11 participants who did not provide their gender identity and/or sexual orientation were removed from analysis as many of the analyses were comparing the LGBTIQ+ participants with the cishet participants. Therefore, 385 participants were included in the analyses. Of these, 213 were cishet and 172 were LGBTIQ+.

A Chi-square analysis was performed using all participants who had completed to the end of the demographic survey items (n = 635) to determine whether more LGBTIQ+ participants (n = 246) were dropping out of the survey

at the gambling questions compared with the cishet participants (*n* = 389). The analysis revealed that there was not a significant difference (*p* = .726) in drop-out rates between the cishet participants (2.8 per cent) and LGBTIQ+ participants (3.7 per cent).

Table 1 includes the participants' gender identities. Among the cishet group, most participants identified as male and six participants identified as female. The majority of LGBTIQ+ participants also identified as male and 23 per cent identified as female. About 7 per cent identified as non-binary/gender fluid and a small proportion of participants identified as trans female, trans male, and agender. Fourteen participants identified as more than one gender identity (i.e., they identified as male or female and trans or gender diverse). One participant selected "other" and wrote they are questioning. Three participants were intersex.

Table 1 Gender identities of cisgender and heterosexual and LGBTIQ+ participants, (*n*)

Gender identities	Cishet	LGBTIQ+			
		First identified gender	Second identified gender	Third identified gender	Fourth identified gender
Male	207	110	0	0	0
Female	6	40	0	0	0
Trans female	0	2	4	0	0
Trans male	0	6	3	0	0
Non-binary/gender fluid	0	12	5	2	0
Agender	0	2	2	2	0
Other	0	0	0	0	1

As can be seen in Table 2, the sexual orientations of participants were varied. The largest proportions of participants identified as gay and bisexual. About 11 per cent and nearly nine per cent identified as pansexual and queer, respectively. Only six per cent identified as lesbian, however, there were low numbers of cisgender women and trans women in the study. The three LGBTIQ+ participants who identified as heterosexual were trans and gender diverse. Of those who selected "other", four reported multiple sexual orientations and three reported a sexual orientation that was not included in the list: 1) queer, aromantic, and bisexual; 2) pansexual; 3) non-classified; 4) greysexual (part of the asexual spectrum); 5) gay and queer; 6) bisexual and asexual; and 7) "I have sex with people I find attractive. Gender is like last [sic] question on my mind, but I find femininity the most attractive."

Table 2 Sexual orientations of cisgender and heterosexual and LGBTIQ+ participants, *n* (%)

Sexual orientations	Cishet	LGBTIQ+
Lesbian	0	11 (6.4)
Gay	0	53 (30.8)
Bisexual	0	60 (34.9)
Queer	0	15 (8.7)
Pansexual	0	19 (11.1)
Asexual	0	4 (2.3)
Heterosexual	213 (100)	3 (1.7)[a]
Other	0	7 (4.1)

[a] The gender identity of these participants was trans and gender diverse.

Table 3 displays the demographic characteristics of the cishet and the LGBTIQ+ participants. As can be seen, the two participant groups had similar mean ages and a similar proportion lived alone. The difference in relationship-status between LGBTIQ+ participants and cishet participants approached significance. Among the LGBTIQ+ participants who were in a relationship with one person, 49.4 per cent were in a relationship with a man, 39.0 per cent with a woman, 3.9 per cent with a trans man, and 2.6 per cent were in a relationship with a trans woman, a non-binary person, or a genderfluid person. Of the LGBTIQ+ participants who were in a relationship with more than one person, the gender identities of the partners included male, female, agender, and trans women. The sexual orientations of the partner/s included bisexual, heterosexual, bicurious, binary intersexual, gay, and homoflexible. Of those participants in a relationship in the cishet group and the LGBTIQ+ group, the majority (80.7 per cent and 75.6 per cent respectively) reported their partners as a primary source of emotional support.

The majority of participants lived in urban areas and they tended to be located in New South Wales, Victoria, and Queensland. A significantly greater proportion of LGBTIQ+ participants had completed a university or higher degree compared with the cishet group, however, they were also significantly more likely to be unemployed while a significantly greater proportion of cishet participants were employed full-time.

Table 3 Comparisons in demographic characteristics between cisgender and heterosexual and LGBTIQ+ participants

Characteristics	Cishet	LGBTIQ+	Inferential statistics	Effect size
Age, *M* (*SD*), years	26.5 (11.4)	26.8 (10.3)	t (383) = -.29, p = .772	d = .03
Indigeneity (ref = yes), *n* (%)	6 (2.8)	4 (2.3)	χ^2 (1, n=385) = .09, p = 1.000	Φ = -.02
Live alone (ref = yes), *n* (%)	21 (9.9)	21 (12.2)	χ^2 (1, n=385) = .33, p =.568	Φ = .04
Relationship status, *n* (%)			χ^2 (2, n=385) = 5.97, p = .051	Φ = .12
With one person	112 (52.6)	77 (44.8)		
With more than one person	3 (1.4)	9 (5.2)		
Single	98 (46.0)	86 (50.0)		

Characteristics	Cishet	LGBTIQ+	Inferential statistics	Effect size
Currently live, *n* (%)			χ^2 (4, n=384) = 2.30, *p* = .681	Φ = .08
Inner urban	58 (27.2)	58 (33.7)		
Outer urban	91 (42.7)	68 (39.5)		
Regional centre[a]	29 (13.6)	23 (13.4)		
Rural area 1[b]	26 (12.2)	19 (11.1)		
Rural area 2[c]	8 (3.8)	4 (2.3)		
State, *n* (%)			χ^2 (7, n=385) = 10.91, *p* = .135	Φ = .17
Australian Capital Territory	5 (2.4)	4 (2.3)		
New South Wales	76 (35.7)	47 (27.3)		
Victoria	44 (20.7)	55 (32.0)		
Queensland	46 (21.6)	27 (15.7)		
South Australia	15 (7.0)	14 (8.1)		
Western Australia	19 (8.9)	19 (11.1)		
Tasmania	6 (2.8)	6 (3.5)		
Northern Territory	2 (0.9)	0		
Education, n (%)			χ^2 (3, n=385) = 13.57, p = .004	Φ = .19
Primary/secondary school	132 (62.0)	90 (52.3)		
Certificate/diploma	45 (21.1)	28 (16.3)		
University degree	32 (15.0)	41 (23.8)*		
Higher degree	4 (1.9)	13 (7.6)*		
Occupational status, n (%)			χ^2 (5, n=384) = 34.63, p < .001	Φ = .30
Part-time	73 (34.3)	66 (38.4)		
Full-time	102 (47.9)*	42 (24.4)		
Unpaid work (including home duties)	3 (1.4)	6 (3.5)		
Unemployed, seeking work	16 (7.5)	40 (23.3)*		
Unemployed, not seeking work	7 (3.3)	11 (6.4)		
None of these	11 (5.2)	7 (4.1)		

Note: Rows in bold indicate significant differences between groups. *d* = Cohen's *d*. Φ = Phi.

*Indicates that the proportion of respondents in that category from that group (either cishet or LGBTIQ+ participants) is significantly higher than the proportion of respondents from the other group.

[a] Population 50,000 or more. [b] Population 5,000-50,000. [c] Population less than 5,000.

As can be seen in Table 4, the cishet group and the LGBTIQ+ group of participants significantly differed on both gambling measures (PGSI and SGHS) and almost all of the risk and protective factors. The cishet participants reported a significantly higher severity of gambling problems, more gambling harms, a higher level of erroneous gambling cognitions, and more positive and negative gambling expectancies (i.e. a higher level of expectation about the reinforcing and punishing effects of engaging in gambling, such as obtaining more money or getting hooked) compared with the LGBTIQ+ group.

A significantly higher proportion of LGBTIQ+ participants reported that none of their friends, or one, two or three of their friends also gambled, while a greater proportion of cishet participants reported that four of their friends gambled. Significantly higher levels of hazardous alcohol use was reported by cishet participants, however, both groups were on average classified as hazardous drinkers as their mean scores exceeded the cut-off of four. Drug use was generally low as the majority of participants in both groups reported zero use in the past 12 months. The LGBTIQ+ participants were on average significantly more impulsive than the cishet participants, reported higher levels of psychological distress, were less resilient, and had less social support and community connectedness.

Table 4 Comparisons in gambling measures, and risk and protective factors between cisgender and heterosexual and LGBTIQ+ participants

Characteristics	Cishet	LGBTIQ+	Inferential statistics	Effect size
Problem gambling severity[a], M (SD)	8.2 (8.1)*	5.2 (6.1)	Welch(383.64) = 4.16, p < .001	d = -.42
Gambling-related harms[b], M (SD)	3.8 (3.4)*	3.1 (3.2)	*t* (383) = 2.21, p = .027	d = -.23
Erroneous gambling cognitions total[c], M (SD)	66.7 (25.0)*	57.9 (24.6)	*t* (383) = 3.47, p = .001	d = -.36
Erroneous gambling expectancies[c], M (SD)	14.0 (4.8)*	12.4 (5.4)	Welch(347.04) = 3.217, p = .001	d = -.33
Illusion of control[c], *M* (*SD*)	8.2 (4.8)	7.8 (4.9)	*t* (383) = .84, *p* = .404	*d* = -.09
Predictive control[c], M (SD)	17.2 (7.5)*	15.7 (7.4)	*t* (383) = 2.03, p = .043	d = -.21
Inability to stop gambling[c], M (SD)	13.2 (8.5)*	10.4 (6.9)	Welch(383.00) = 3.54, p < .001	d = -.35
Interpretive bias[c], M (SD)	14.0 (6.0)*	11.6 (6.0)	t (383) = 3.63, p < .001	d = -.41
Positive gambling expectancies[d], M (SD)	65.6 (11.7)*	58.7 (15.2)	Welch(315.69) = 4.95, p < .001	d = -.52
Negative gambling expectancies[d], M (SD)	24.2 (12.1)*	20.6 (10.8)	t (383) = 3.04, p = .003	d = -.31
Peer norms, n (%)			χ^2 (4, n=385) = 42.99, p < .001	Φ = .33
None of my friends	8 (3.8)	22 (12.8)*		
1 of my friends	15 (7.0)	21 (12.2)		
2 of my friends	33 (15.5)	53 (30.8)*		
3 of my friends	19 (8.9)	20 (11.6)		
4 of my friends	138 (64.8)*	56 (32.6)		
Hazardous alcohol use[e], M (SD)	6.1 (3.0)*	5.0 (3.1)	t (383) = 3.59, p < .001	d = -.37
Drug use, *n* (%)			χ^2 (3, n=328) = 2.11, *p* = .562	Φ = .08
Never	109 (51.2)	78 (45.4)		
At least once a year but less than monthly	44 (20.7)	44 (25.6)		
At least monthly but less than weekly	4 (1.9)	5 (2.9)		
At least weekly	24 (11.3)	20 (11.6)		
Impulsivity[f], M (SD)	2.3 (0.8)	2.5 (0.7)*	*t* (383) = -2.90, p = .004	d = .29
Psychological distress[h], M (SD)	14.0 (5.8)	17.0 (6.0)*	*t* (383) = -4.91, p < .001	d = .50

Characteristics	Cishet	LGBTIQ+	Inferential statistics	Effect size
Resilience[g], M (SD)	3.4 (0.9)*	2.9 (0.9)	*t* (383) = 5.44, p < .001	d = -.56
Social support[i], M (SD)	3.8 (1.1)*	3.5 (1.0)	t (383) = 2.75, p = .006	d = -.29
Mainstream community connectedness[j], M (SD)	18.6 (4.6)*	17.3 (4.4)	t (383) = 2.72, p = .007	d = -.28
LGBTIQ+ community connectedness[j], *M* (*SD*)	-	18.4 (5.2)	-	-
Perceived stigma[k], *M* (*SD*)	-	17.2 (6.1)	-	-
Perceived discrimination, *M* (*SD*)			-	-
Not at all	-	43 (25.0)		
Not really	-	36 (20.9)		
Undecided	-	14 (8.1)		
Somewhat	-	58 (33.7)		
Very much	-	18 (10.5)		

Note: Rows in bold indicate significant differences between groups. *d* = Cohen's *d*. Φ = Phi.

*Indicates that the proportion of respondents in that category from that group (either cishet or LGBTIQ+ participants) is significantly higher than the proportion of respondents from the other group.

[a]Problem Gambling Severity Index. Score range = 0-27. [b]Short Gambling Harms Screen. Score range = 0-10. [c]Gambling Related Cognition Scale (GRCS). Total score range = 23-161; Erroneous gambling expectancies score range = 4-28; Illusion of control score range = 4-28; Predictive control score range = 6-42; Inability to stop gambling score range = 5-35; Interpretive bias score range = 4-28.[d]Gambling Expectancy Questionnaire (GEQ). Positive scale score range = 15-105; Negative scale score range = 8-56. [e]Alcohol Use Disorders Identification Test – Consumption (AUDIT-C). Score range = 0-12. [f]The (Negative) Urgency subscale of the UPPS-P Impulsive Behaviour Scale. Score range = 1-4.[g]The Brief Resilience Scale (BRS). Score range = 1-6.[h]6-item Kessler Psychological Distress Scale (K6). Score range = 0-24. [i]The Medical Outcomes Study Social Support Survey (MOS-SS). Score range = 1-5. [j]Connectedness to the LGBT Community Scale. Score range = 7-28. [k]Perceptions of Local Stigma Scale (PLS). Score range = 7-35.

Gambling behaviour

A Welch *t*-test was conducted to compare the PGSI scores for cishet participants and LGBTIQ+ participants. The test revealed a significant difference in PGSI scores for the cishet participants (*M* = 8.2, *SD* = 8.1) and the LGBTIQ+ participants (*M* = 5.2, *SD* = 6.1; *Welch* (381.64) = 4.16, *p* < .001, two-tailed). The size of the difference in the means (mean difference = 3.0, 95% *CI*: 1.59 to 4.43) was small (Cohen's *d* = -.41). Moreover, a Chi-square test for independence revealed a significant difference in PGSI categories between the two participant groups (*p* = .002, *phi* = .20), with a greater proportion of LGBTIQ+ participants classified in the non-problem gambling category and a greater proportion of cishet participants scoring in the problem gambling category (see Table 5).

An independent-samples *t*-test was conducted to compare the SGHS scores for cishet participants and LGBTIQ+ participants. As was reported in Table 4, the cishet participants were found to have a significantly higher average SGHS score (*M* = 3.8, *SD* = 3.4) than the LGBTIQ+ participants (*M* = 3.1, *SD* = 3.2; *t* (383) = 2.22, *p* = .027, two-tailed). The size of the difference in the means (mean difference = .7, 95% *CI*: .08 to 1.41) was small (Cohen's *d* = -.21). However, a Chi-square test for independence comparing the proportion of cishet participants (*n* = 161, 75.6%) and LGBTIQ+ participants (*n* = 117, 68.0%) who reported experiencing any harms (i.e. SGHS score ≥ 1) did find a significant difference (*p* = .125, *phi* = -.08).

Table 5 Comparison of PGSI categories for cisgender and heterosexual and LGBTIQ+ participants, *n* (%)

PGSI category	Cishet	LGBTIQ+
Non-problem gambling	28 (13.2)	49 (28.5)*
Low-risk gambling	40 (18.8)	32 (18.6)
Moderate-risk gambling	61 (28.6)	43 (25.0)
Problem gambling	84 (39.4)*	48 (27.9)

Note: Rows in bold indicate significant differences between groups.

Inferential statistics: χ2 (3, *n*=385) = 15.36, *p* =.002, *phi* = .20

*Indicates that the proportion of respondents in that category from that group (either cishet or LGBTIQ+ participants) is significantly higher than the proportion of respondents from the other group.

Table 6 displays the frequencies of participants who had participated in each type of gambling activity in the previous 12 months. As can be seen, a significantly higher proportion of cishet participants participated in pokies/electronic gaming machines, casino table games, horse racing/greyhounds, sports, and keno. A significantly higher proportion of LGBTIQ+ participants participated in instant scratch tickets and bingo. No statistically significant differences were found between the groups for informal private games, events, and Lotto/Powerball than LGBTIQ+ participants.

Table 6 Comparisons in participation in gambling activities between cisgender and heterosexual and LGBTIQ+ participants, *n* (%)

Gambling activity	Cishet	LGBTIQ+	Inferential statistics	Phi
Informal private games	82 (38.5)	51 (29.7)	χ^2 (1, n=385) = 2.51, *p* = .113	.09
Pokies/electronic gaming machines	138 (64.8)*	91 (52.9)	χ^2 (1, n=385) = 5.09, p = .024	-.12
Casino table games	135 (63.4)*	61 (35.5)	χ^2 (1, n=385) = 28.56, p < .001	-.28
Horse racing/greyhounds	154 (72.3)*	64 (37.2)	χ^2 (1, n=385) = 46.29, p < .001	-.35
Sports	151 (70.9)*	50 (29.1)	χ^2 (1, n=385) = 65.04, p < .001	-.42
Events[a]	36 (16.9)	28 (16.3)	χ^2 (1, n=385) = .001, *p* =.980	-.01
Keno	81 (38.0)*	37 (21.5)	χ^2 (1, n=385) = 11.45, p =.001	-.18
Lotto/Powerball	105 (49.3)	78 (45.4)	χ^2 (1, n=385) = .45, *p* =.504	-.04
Instant scratch tickets	77 (36.2)	82 (47.7)*	χ^2 (1, n=385) = 4.75, p = .029	.12
Bingo	6 (2.8)	16 (9.3)*	χ^2 (1, n=385) = 6.27, p = .012	.14

Note: Rows in bold indicate significant differences between groups.

[a]Such as, election results, current affairs and TV shows. *Indicates that the proportion of respondents in that category from that group (either cishet or LGBTIQ+ participants) is significantly higher than the proportion of respondents from the other group.

Table 7 displays the number of times participants engaged in each gambling activity in the past 12 months. As can be seen, the cishet group participated in pokies/electronic gaming machines, casino table games, horse racing/greyhounds, sports betting, and keno a significantly greater number of times compared with the LGBTIQ+ group. However, the LGBTIQ+ group of participants more frequently participated in instant scratch tickets and bingo than the cishet group.

The amount of money participants spent on average during each gambling session in the past 12 months is displayed in Table 8. The cishet group of participants on average spent a significantly greater amount on pokies/electronic gaming machines, casino table games, horse racing/greyhounds, sports betting, keno and scratch tickets, however, LGBTIQ+ participants on average spent significantly more money on bingo.

Table 7 Comparisons in past 12-month gambling frequency[a] between cisgender and heterosexual and LGBTIQ+ participants

Gambling activity	Cishet			LGBTIQ+			Inferential statistics	Effect size (*r*)
	M (SD)	Median	IQR	*M (SD)*	Median	IQR		
Informal private games	33.7 (107.4)	0.0	5.0	13.0 (45.9)	0.0	0.0	*U* = 15086.00, *z* = -1.71, *p* = .087	-.09
Pokies/electronic gaming machines	36.8 (84.4)*	4.0	36.0	22.2 (44.0)	2.0	24.0	*U* = 14319.00, z = -2.84, p = .005	-.15
Casino table games	171.9 (1993.3)*	2.0	12.0	6.9 (27.3)	0.0	3.0	*U* = 12225.50, z = -5.58, p < .001	-.29
Horse racing/greyhounds	168.1 (492.9)*	52.0	208.0	36.9 (113.1)	0.0	7.0	*U* = 9609.50, z = -7.80, p < .001	-.40
Sports	332.2 (2190.1)*	28.0	104.0	18.5 (70.0)	0.0	1.0	*U* = 8326.50, z = -8.91, p < .001	-.46
Events	37.3 (460.1)	0.0	.0	3.0 (19.2)	0.0	0.0	*U* = 17114.00, *z* = -.40, *p* = .690	-.02
Keno	8.1 (25.4)*	0.0	4.0	4.8 (20.6)	0.0	0.0	*U* = 14385.00, z = -3.54, p < .001	-.18
Lotto/Powerball	43.4 (399.0)	0.0	5.3	16.4 (60.0)	0.0	3.0	*U* = 16153.50, *z* = -.98, *p* = .328	-.05
Instant scratch tickets	6.6 (24.9)	0.0	2.0	9.4 (45.1)*	0.0	4.0	*U* = 17623.50, z = 1.96, p = .050	.10
Bingo	.1 (.3)	0.0	0.0	.6 (4.4)*	0.0	0.0	*U* = 19107.50, z = 2.42, p = .016	.12

Note: Rows in bold indicate significant differences between groups. *M* = mean. *SD* = standard deviation. IQR = interquartile range.

[a]Average number of times participants gambled in the previous 12 months. *Higher gambling frequency between groups.

Table 8 Comparisons in past 12-month gambling expenditure[a] ($) between cisgender and heterosexual and LGBTIQ+ participants

Gambling activity	Cishet			LGBTIQ+			Inferential statistics	Effect size (*r*)
	M (*SD*)	Median	IQR	*M* (*SD*)	Median	IQR		
Informal private games	150.3 (595.4)	0.0	20.0	41.1 (347.4)	0.0	0.0	*U* = 14032.50, *z* = -1.66, *p* = .097	-.09
Pokies/electronic gaming machines	1019.0 (8658.5)*	10.0	65.0	232.0 (1407.4)	0.0	50.0	*U* = 13318.50, z = -2.49, p = .013	-.13
Casino table games	708.1 (4321.8)*	35.0	200.0	74.3 (303.5)	0.0	40.0	*U* = 11062.50, z = -5.56, p < .001	-.29
Horse racing/greyhounds	586.2 (4264.3)*	20.0	100.0	18.4 (44.3)	0.0	10.0	*U* = 9108.50, z = -6.85, p < .001	-.37
Sports	153.1 (620.4)*	10.0	50.0	11.9 (35.0)	0.0	5.0	*U* = 9095.50, z = -7.15, p < .001	-.38
Events	27.6 (188.0)	0.0	0.0	5.3 (18.7)	0.0	0.0	*U* = 16733.50, *z* = -.60, *p* = .547	-.03
Keno	20.3 (74.8)*	0.0	10.0	3.7 (11.9)	0.0	0.0	*U* = 14081.50, z = -3.35, p = .001	-.17
Lotto/Powerball	19.4 (44.7)	0.0	25.0	18.1 (87.8)	0.0	16.5	*U* = 15653.00, *z* = -1.05, *p* =.293	-.05
Instant scratch tickets	6.4 (27.5)*	0.0	5.0	4.5 (7.2)	0.0	6.3	*U* = 17977.00, z = 2.28, p = .023	.12
Bingo	.2 (2.1)	0.0	0.0	3.9 (17.0)*	0.0	0.0	*U* = 18884.00, z = 2.26, p = .024	.12

Note: Rows in bold indicate significant differences between groups. *M* = mean. *SD* = standard deviation. IQR = interquartile range.

[a]Amount of money spent on average during each gambling session. By spend, we meant the difference between what the participant took with them (including any additional money withdrawn or borrowed during the period of betting) and what they had left when they finished. *Higher gambling frequency between groups.

Examination of potential risk factors for problem gambling and gambling-related harms

The relationship between each potential risk factor and PGSI scores and SGHS scores was examined using Pearson *r* correlations for the cishet participants and the LGBTIQ+ participants separately. As can be seen in Table 9, among the cishet participants, both PGSI scores and SGHS scores had small positive correlations with hazardous alcohol use, medium positive correlations with illusion of control, predictive control, and psychological distress, and large positive correlations with inability to stop gambling beliefs, interpretive bias, negative gambling expectancies, and impulsivity. While PGSI scores had a medium positive correlation with erroneous gambling expectancies and a large positive correlation with impulsivity, SGHS scores obtained a small positive correlation and medium positive correlation with these scales, respectively. Positive gambling expectancies and peer norms were not significantly associated with PGSI scores or SGHS scores.

As can be seen in Table 9, among the LGBTIQ+ participants, PGSI scores and SGHS scores had a small positive correlation with alcohol use, medium positive correlations with illusion of control, predictive control, and impulsivity, and large positive correlations with inability to stop gambling beliefs, and negative gambling expectancies. PGSI scores obtained medium positive correlations with erroneous gambling expectancies and positive gambling expectancies, and a large positive correlation with interpretive bias, while SGHS scores had slightly weaker relationships with these scales. Last, psychological distress and perceived stigma had small positive correlations with SGHS scores but not PGSI scores. Similar to the cishet group, peer norms were not significantly associated with either PGSI scores or SGHS scores.

There were therefore several similarities in the correlations obtained for both participant groups. That is, in both groups of participants, those with higher PGSI scores and/or higher SGHS scores were more likely to have higher levels of erroneous gambling cognitions, expectations for negative outcomes from gambling, hazardous drinking, and impulsivity. However, there were also some notable differences. That is, among the LGBTIQ+ group, participants with higher PGSI scores and/or higher SGHS scores had higher levels of more expectations for positive outcomes from gambling, while these relationships were not found to be significant in the cishet group. Furthermore, the cishet group of participants with higher PGSI scores and/or higher SGHS scores reported higher psychological distress while this was only true for LGBTIQ+ participants with higher SGHS scores.

Table 9 Correlations between PGSI scores, SGHS scores, and risk factors for the cisgender and heterosexual participants (to the left of and below the diagonal) and LGBTIQ+ participants (to the right of and above the diagonal)

	Cishet M (SD)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
LGBTIQ+ M (SD)	-	5.2 (6.1)	3.1 (3.2)	57.9 (24.6)	12.4 (5.4)	7.8 (4.9)	15.7 (7.4)	10.4 (6.9)	11.6 (6.0)	58.7 (15.2)	20.6 (10.8)	150 (87.2)†	5.0 (3.1)	2.5 (0.7)	19.0 (6.0)	22.4 (2.5)	76 (45.0)†
1. PGSI[a]	*8.2 (8.1)*	-	.75	.67	.56	.32	.46	.72	.60	.38	.68	-.06	.18	.32	.11	.07	-.01
2. SGHS[b]	*3.8 (3.4)*	.79	-	.56	.41	.32	.40	.62	.47	.25	.66	-.07	.20	.31	.17	.21	.02
3. GRCS total[c]	*66.7 (25.0)*	.70	.58	-	.78	.75	.85	.76	.86	.61	.70	-.01	.23	.24	.04	.12	.03
4. Erroneous gambling expectancies[c]	*14.0 (4.8)*	.40	.29	.72	-	.48	.54	.56	.62	.64	.51	-.03	.09	.14	-.04	.08	-.07
5. Illusion of control[c]	*8.2 (4.8)*	.46	.43	.79	.44	-	.67	.40	.53	.40	.42	.06	.22	.19	.09	.19	.15
6. Predictive control[c]	*17.2 (7.5)*	.42	.32	.82	.46	.68	-	.45	.71	.56	.44	.11	.26	.17	.02	.09	.05
7. Inability to stop gambling[c]	*13.2 (8.5)*	.75	.70	.78	.51	.52	.39	-	.59	.32	.81	-.11	.19	.24	.04	.08	-.00
8. Interpretive bias[c]	*14.0 (6.0)*	.60	.45	.83	.53	.55	.69	.52	-	.56	.59	-.07	.15	.22	.05	.06	.02
9. Positive gambling expectancies[d]	*65.6 (11.7)*	*.04*	*-.07*	.29	.45	.17	.30	*.06*	.26	-	.30	.11	.18	.06	-.20	-.10	-.16
10. Negative gambling expectancies[d]	*24.2 (12.1)*	.75	.74	.71	.48	.45	.40	.81	.52	*.09*	-	-.11	.12	.39	.15	.16	.07
11. Peer norms[e]	*205 (96.2)*†	*.12*	*.05*	.16	.17	*.07*	.15	*.10*	.15	.18	.55	-	.13	-.11	-.10	-.02	-.11
12. Alcohol use[f]	*6.1 (3.0)*	.19	.18	*.22*	*.11*	.20	*.11*	.23	.19	*.08*	.30	*.06*	-	.04	.03	.06	.08
13. Impulsivity[g]	*2.3 (0.8)*	.53	.50	.50	.32	.40	.29	.56	.35	*-.04*	*.00*	*.09*	*.13*	-	.39	.10	.21
14. Distress[h]	*22.0 (5.8)*	.42	.40	.39	.24	.34	.24	.44	.24	*-.09*	.47	*.05*	*.11*	.60	-	-.33	-.32
15. Perceived stigma[i] ‡	-	-	-	-		-					-		-	-	-	-	.34
16. Experienced discrimination (ref = no)[j‡‡]	-	-	-	-		-					-		-	-	-	-	-

Note: Correlations for the cishet participants (*n* = 213) are to the left of and below the diagonal in italics. Correlations for the LGBTIQ+ participants (*n* = 172) are to the right of and above the diagonal. Cells in bold indicate significant correlations.

†*n* (%). ‡*N* = 169 for perceived stigma. ‡‡ *N* = 169 for experiences of discrimination. *M* = mean. *SD* = standard deviation.

[a]Problem Gambling Severity Index. Score range = 0-27. [b]Short Gambling Harms Screen. Score range = 0-10. [c]Gambling Related Cognition Scale (GRCS). Total score range = 23-161; Erroneous gambling expectancies score range = 4-28; Illusion of control score range = 4-28; Predictive control score range = 6-42; Inability to stop gambling score range = 5-35; Interpretive bias score range = 4-28.[d]Gambling Expectancy Questionnaire (GEQ). Positive scale score range = 15-105; Negative scale score range = 8-56.[e]Peer norms was recoded to a binary variable to allow for correlation analyses: 0 = no friends have gambled in the past year, 1 = 1 or more friends have gambled in the past year. [f]Alcohol Use Disorders Identification Test – Consumption (AUDIT-C). Score range = 0-12. [g]The (Negative) Urgency subscale of the UPPS-P Impulsive Behaviour Scale. Score range = 1-4.[h]6-item Kessler Psychological Distress Scale (K6). Score range = 0-24. [i]Perceptions of Local Stigma Scale (PLS). Score range = 7-35. [j]Discrimination was recoded to a binary variable to allow for correlation analyses: 0 = no discrimination experienced/undecided, 1 = have experienced discrimination.

Two hierarchical multiple regression analyses predicting 1) PGSI scores and 2) SGHS scores were performed for the cishet group of participants. Due to missing data, drug use was excluded from the analysis. Positive gambling expectancies and peer norms were not included in the regression models as they were not significantly correlated with either PGSI scores or SGHS scores. Moreover, issues with multicollinearity arose with models that included both positive and negative expectancies and the subscales of the GRCS, indicated by tolerance < .3, high correlations (up to .82, see Table 3.9) and reversal of signs for some coefficients compared to the expected direction from the bivariate correlations. Due to these issues with multicollinearity, the total score for erroneous gambling cognitions was used instead of the individual subscales, with no further multicollinearity issues. Therefore, the two models included age (as a covariate), erroneous gambling cognitions, negative gambling expectancies, alcohol use, psychological distress, and impulsivity. After running the models using the entire group of cishet participants, the Mahalanobis distances were inspected to determine if there were any multivariate outliers. Using a critical value of 22.458 and an alpha level of .001 (as per guidelines from Tabachnick & Fidell, 2007), the maximum Mahalanobis distance value of 29.080 exceeded the critical value. However, removal of the two outliers did not improve the model and therefore, the two participants were retained for the analyses.

Among the cishet group of participants, the model predicting PGSI scores overall significantly accounted for 63.1 per cent of variance. The overall model for predicting SGHS scores significantly accounted for 55.1 per cent of variance. As can be seen in Tables 10 and 11, among the cishet group, higher PGSI scores were significantly associated with higher levels of erroneous cognitions about gambling and more negative expectancies about gambling, when controlling for age. Also, higher SGHS scores were significantly associated with more negative gambling outcome expectancies.

Two hierarchical multiple regression analyses predicting 1) PGSI scores and 2) SGHS scores were also performed for the LGBTIQ+ group of participants. Drug use, perceived stigma and discrimination were not included in the regression models due to missing data. Peer norms were not included in the regression models as the measure was not correlated with either PGSI scores or SGHS scores. Psychological distress was not included in the regression model for PGSI scores as the two variables were not significantly correlated. The same issues with multicollinearity that were identified in the cishet group were also identified in the LGBTIQ+ group. Thus, the same approach of using the erroneous gambling cognitions total scale, rather than subscales, was employed for these analyses. After running the models using the entire group of LGBTIQ+ participants, the Mahalanobis distances were inspected to determine if there were any multivariate outliers. Using a critical value of 22.458 and an alpha level of .001 for the model predicting PGSI scores (as per guidelines from Tabachnick & Fidell, 2007), our maximum Mahalanobis distance value of 19.211 did not exceed the critical value. Using a critical value of 24.322 and an alpha level of .001 for the model predicting SGHS scores (as per guidelines from Tabachnick & Fidell, 2007), the maximum Mahalanobis distance value of 27.626 exceeded the critical value. However, removal of the one outlier did not improve the model and therefore, the participant was retained for analysis.

For the LGBTIQ+ participants, the overall models predicting PGSI scores and SGHS scores, while controlling for age, significantly accounted for 55.0 per cent and 48.2 per cent of variance, respectively. Among LGBTIQ+ participants, when controlling for age, higher PGSI scores were significantly associated with more erroneous cognitions about gambling and more negative expectancies about gambling. Furthermore, higher SGHS scores were significantly associated with more negative expectancies about gambling (see Tables 10 and 11).

Table 10 Hierarchical multiple regressions predicting PGSI score with possible risk factors among cisgender and heterosexual participants and LGBTIQ+ participants

	Cishet				LGBTIQ+			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (*SE*)**	***β***	***t***	***p***
(Constant)	-.11 (-.54, .31)		-.53	.595	-.99 (-1.67, -.31)		-2.87	.005
Age (in years)	-.01 (-.02, .00)	-.08	-1.86	.064	.00 (-.01, .01)	.04	.65	.515
Alcohol use	.00 (-.03, .03)	.00	.06	.949	.02 (-.02, .05)	.05	.91	.362
Distress	.01 (-.01, .03)	.04	.64	.522	-	-	-	-
Impulsivity	.05 (-.11, .21)	.04	.59	.555	.13 (-.04, .30)	.09	1.52	.130
Erroneous gambling cognitions	.01 (.01, .02)	.30	5.01	< .001	.01 (.01, .02)	.34	3.67	< .001
Positive gambling expectancies	-	-	-	-	.00 (-.01, .01)	.05	.69	.489
Negative gambling expectancies	.04 (.03, .05)	.50	7.33	< .001	.04 (.02, .05)	.39	4.96	< .001
R^2	.63				.55			
F	58.68***				33.66***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001

Table 11 Hierarchical multiple regressions predicting SGHS score with possible risk factors among cisgender and heterosexual participants and LGBTIQ+ participants

	Cishet				LGBTIQ+			
	***B* (95% CI)**	***β***	**t**	**p**	***B* (95% CI)**	***β***	**t**	**p**
(Constant)	-1.87 (-3.34, 1.73)		-2.45	.015	-3.93 (-6.41, -1.45)		-3.13	.002
Age (in years)	-.01 (-.03, .02)	-.02	-.38	.704	.04 (.00, .07)	.12	1.99	.048
Alcohol use	.02 (-.09, .12)	.02	.31	.754	.11 (-.01, .23)	.11	1.84	.067
Distress	.03 (-.04, .10)	.05	.84	.404	.05 (-.02, .11)	.09	1.41	.162
Impulsivity	.08 (-.48, .65)	.02	.28	.777	.16 (-.44, .75)	.03	.52	.606
Erroneous gambling cognitions	.02 (-.00, .03)	.11	1.65	.100	.02 (-.00, .05)	.18	1.77	.079
Positive gambling expectancies	-	-	-	-	.00 (-.03, .03)	.00	.04	.971
Negative gambling expectancies	.17 (.13, .21)	.62	8.28	< .001	.14 (.09, .19)	.49	5.76	< .001
R^2	.55				.48			
F	42.15***				21.81***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001

A series of four separate multivariate regression analyses were conducted for each risk factor analysed above in hypothesis two (alcohol use, psychological distress, impulsivity, erroneous gambling expectancies, illusion of control, predictive control, inability to stop gambling beliefs, interpretive bias, positive gambling expectancies, and negative gambling expectancies) while controlling for age to examine whether each was a stronger predictor for PGSI scores and/or SGHS scores for LGBTIQ+ participants than cishet participants by inspecting the interaction terms (see Tables 12 to 21). A significant interaction in Table 13 indicated that LGBTIQ+ status moderated the relationship between psychological distress and PGSI scores and SGHS scores. A simple slope analysis revealed that psychological distress was a significantly more pronounced risk factor for PGSI scores among the cishet group with more psychological distress predicting higher PGSI scores. The simple slope analysis for psychological distress and SGHS scores was significant for both participant groups, however, psychological distress was a stronger predictor of SGHS scores among the cishet participants. The relationship between inability to stop gambling beliefs and PGSI scores was found to be significantly moderated by LGBTIQ+ status (see Table 18). The simple slope analysis revealed that the risk factor was significant for both participant groups, however, it was more pronounced among the LGBTIQ+ group with higher PGSI scores predicted by greater inability to stop gambling beliefs. Last, as can be seen in Table 20, LGBTIQ+ status was found to significantly moderate the relationship between positive gambling expectancies and PGSI scores and SGHS scores. Simple slope analyses found that this risk factor was significantly more pronounced among the LGBTIQ+ participants than the cishet participants. Although the other risk factors were not found to be significantly stronger predictors for PGSI scores and SGHS scores for the LGBTIQ+ group of participants than the cishet group of participants, there was not enough evidence to reject the null hypothesis. It is possible that with more participants, other significant interactions may have been found.

Table 12 Multivariate regressions predicting PGSI score and SGHS score with alcohol use and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.87 (1.56, 2.16)		12.78	< .001	3.58 (2.67, 4.48)		7.76	< .001
Age (in years)	-.01 (-.02, .004)	-.05	-1.09	.276	.01 (-.02, .04)	.02	.36	.718
LGBTIQ+ identity	-.37 (-.58, -.16)	-.17	-3.46	.001	-.52 (-1.18, .15)	-.08	-1.54	.126
Alcohol use (centred score)	.06 (.02, .11)	.19	2.71	.007	.20 (.06, .35)	.19	2.74	.006
Alcohol use x LGBTIQ+ identity interaction	-.004 (-.07, .06)	-.01	-.11	.909	.004 (-.21, .22)	.002	.03	.973
R^2	.08				.05			
F	7.99***				4.83**			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. CI = confidence interval. **p < .01. ***p < .001

Table 13 Multivariate regressions predicting PGSI score and SGHS score with psychological distress and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.90 (1.62, 2.18)		13.47	< .001	3.64 (2.78, 4.51)		8.25	< .001
Age (in years)	-.001 (-.01, .01)	-.01	-.28	.778	.02 (-.01, .05)	.06	1.26	.209
LGBTIQ+ identity	-.57 (-.78, -.36)	-.27	-5.43	< .001	-1.22 (-1.87, -.57)	-.18	-3.71	< .001
Distress (centred score)	.08 (.05, .10)	.43	6.32	< .001	.24 (.16, .31)	.44	6.36	< .001
Distress x LGBTIQ+ identity interaction	-.06 (-.02, -.09)	-.22	-3.28	.001	-.14 (-.25, -.04)	-.18	2.61	.009
Simple slope - Distress (cishet)	.08 (.05, .10)	.31	6.32	< .001	.24 (.16, .31)	.31	6.36	< .001
Simple slope - Distress (LGBTIQ+)	.02 (-.01, .04)	.07	1.45	.147	.10 (.02, .17)	.12	2.40	.017
R^2	.14				.12			
F	15.59***				12.88***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001. Simple slopes analysis controls for age and LGBTIQ+ status. R^2 and *F* are the same as for the total model.

Table 14 Multivariate regressions predicting PGSI score and SGHS score with impulsivity and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.90 (1.64, 2.17)		14.34	< .001	3.68 (2.85, 4.51)		8.72	< .001
Age (in years)	-.003 (-.01, .01)	-.03	-.59	.555	.01 (-.01, .04)	.04	.96	.337
LGBTIQ+ identity	-.57 (-.76, -.38)	-.27	-5.87	< .001	-1.14 (-1.74, -.53)	-.17	-3.67	< .001
Impulsivity (centred score)	.70 (.54, .86)	.49	8.48	< .001	2.15 (1.63, 2.66)	.49	8.22	< .001
Impulsivity x LGBTIQ+ identity interaction	-.21 (-.47, .05)	-.09	-1.59	.114	-.75 (-1.58, .07)	-.11	-1.80	.073
R^2	.24				.19			
F	29.34***				22.94***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001.

Table 15 Multivariate regressions predicting PGSI score and SGHS score with erroneous gambling expectancies and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.92 (1.67, 2.18)		14.74	< .001	3.73 (2.86, 4.60)		8.46	< .001
Age (in years)	-.01 (-.02, .00)	-.09	-1.95	.052	-.002 (-.03, .03)	-.01	-.15	.880
LGBTIQ+ identity	-.27 (-.46, -.09)	-.13	-2.86	.004	-.37 (-1.01, .26)	-.06	-1.16	.247
Erroneous gambling expectancies (centred score)	.09 (.06, .11)	.42	6.67	< .001	.20 (.11, .29)	.31	4.55	< .001
Erroneous gambling expectancies x LGBTIQ+ identity interaction	.02 (-.01, .06)	.08	1.26	.207	.04 (-.08, .16)	.04	.64	.520
R^2	.27				.13			
F	35.04***				14.04***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p* < .001.

Table 16 Multivariate regressions predicting PGSI score and SGHS score with illusion of control and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.81 (1.55, 2.08)		13.29	< .001	3.40 (2.55, 4.25)		7.88	< .001
Age (in years)	-.003 (-.01, .01)	-.03	-.56	.579	.01 (-.01, .04)	.05	.96	.338
LGBTIQ+ identity	-.41 (-.60, -.21)	-.19	-4.14	< .001	-.65 (-1.26, -.03)	-.10	-2.08	.039
Illusion of control (centred score)	.10 (.07, .13)	.45	7.24	< .001	.30 (.22, .39)	.45	7.00	< .001
Illusion of control x LGBTIQ+ identity interaction	-.03 (-.07, .01)	-.09	-1.49	.138	-.09 (-.22, .03)	-.09	-1.44	.151
R^2	.20				.16			
F	23.82***				18.58***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p* < .001.

Table 17 Multivariate regressions predicting PGSI score and SGHS score with predictive control and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.82 (1.55, 2.08)		13.51	< .001	3.47 (2.60, 4.33)		7.88	< .001
Age (in years)	-.003 (-.01, .01)	-.04	-.78	.439	.01 (-.02, .04)	.03	.66	.512
LGBTIQ+ identity	-.34 (-.54, -.15)	-.16	-3.55	< .001	-.50 (-1.13, .12)	-.08	-1.59	.114
Predictive control (centred score)	.06 (.04, .08)	.41	6.72	< .001	.15 (.09, .20)	.33	5.18	< .001
Predictive control x LGBTIQ+ identity interaction	.01 (-.02, .03)	.03	.55	.581	.02 (-.06, .10)	.03	.49	.627
R^2	.23				.14			
F	28.25***				15.04***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001.

Table 18 Multivariate regressions predicting PGSI score and SGHS score with inability to stop gambling and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.83 (1.64, 2.03)		18.25	< .001	3.43 (2.74, 4.12)		9.78	< .001
Age (in years)	-.01 (-.01, .00)	-.07	-2.06	.040	.00 (-.02, .03)	.01	.16	.875
LGBTIQ+ identity	-.16 (-.30, -.01)	-.07	-2.12	.035	.04 (-.47, .54)	.01	.14	.892
Inability to stop gambling (centred score)	.09 (.08, .10)	.68	16.11	< .001	.27 (.24, .31)	.66	13.84	< .001
Inability to stop gambling x LGBTIQ+ identity interaction	.02 (.00, .04)	.09	2.03	.043	.01 (-.06, .08)	.02	.35	.727
Simple slope - Inability to stop gambling (cishet)	.09 (.08, .10)	.55	16.11	< .001	-	-	-	-
Simple slope - Inability to stop gambling (LGBTIQ+)	.11 (.10, .13)	.50	14.17	< .001	-	-	-	-
R^2	.57				.45			
F	125.54***				77.60***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001. Simple slopes analysis controls for age and LGBTIQ+ status. R^2 and *F* are the same as for the total model.

Table 19 Multivariate regressions predicting PGSI score and SGHS score with interpretive bias and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.60 (1.36, 1.84)		13.10	< .001	2.94 (2.10, 3.77)		6.91	< .001
Age (in years)	.00 (-.01, .01)	.02	.53	.595	.02 (.00, .05)	.08	1.64	.101
LGBTIQ+ identity	-.19 (-.36, -.01)	-.09	-2.12	.034	-.14 (-.74, .47)	-.02	-.45	.656
Interpretive bias (centred score)	.10 (.09, .12)	.60	10.82	< .001	.26 (.19, .32)	.48	7.60	< .001
Interpretive bias x LGBTIQ+ identity interaction	.00 (-.03, .03)	.00	.02	.988	-.01 (-.11, .09)	-.01	-.17	.866
R^2	.39				.22			
F	60.48***				27.06***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p < .001.

Table 20 Multivariate regressions predicting PGSI score and SGHS score with positive gambling expectancies and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.86 (1.57, 2.16)		12.44	< .001	3.79 (2.85, 4.73)		7.90	< .001
Age (in years)	-.004 (-.01, .01)	-.04	-.81	.416	.00 (-.03, .03)	.01	.23	.818
LGBTIQ+ identity	-.33 (-.54, -.12)	-.16	-3.09	.002	-.61 (-1.29, .07)	-.09	-1.77	.078
Positive gambling expectancies (centred score)	.00 (-.01, .02)	.04	.49	.628	-.02 (-.06, .02)	-.08	-1.03	.304
Positive gambling expectancies x LGBTIQ+ identity interaction	.02 (.01, .04)	.22	2.94	.003	.07 (.02, .12)	.22	2.85	.005
Simple slope - Positive gambling expectancies (cishet)	.00 (-.01, .02)	.02	.49	.628	-.02 (-.06, .02)	-.05	-1.03	.304
Simple slope - Positive gambling expectancies (LGBTIQ+)	.03 (.02, .04)	.26	5.10	< .001	.05 (.02, .08)	.16	3.17	.002
R^2	.11				.04			
F	11.47***				4.06**			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta.
**p < .01. ***p < .001. Simple slopes analysis controls for age and LGBTIQ+ status. R^2 and *F* are the same as for the total model.

Table 21 Multivariate regressions predicting PGSI score and SGHS score with negative gambling expectancies and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	1.81 (1.61, 2.01)		17.57	< .001	3.37 (2.72, 4.03)		10.10	< .001
Age (in years)	-.01 (-.01, .00)	-.06	-1.66	.098	.01 (-.02, .03)	.02	.42	.675
LGBTIQ+ identity	-.20 (-.35, -.06)	-.10	-2.71	.007	-.03 (-.51, .44)	-.01	-.14	.889
Negative gambling expectancies (centred score)	.06 (.06, .07)	.71	15.69	< .001	.20 (.18, .23)	.72	15.35	< .001
Negative gambling expectancies x LGBTIQ+ identity interaction	.00 (-.01, .02)	.01	.32	.748	-.01 (-.05, .03)	-.02	-.51	.608
R^2	.55				.50			
F	113.75***				95.58***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ****p* < .001.

Examination of potential protective factors for problem gambling and gambling-related harms

The relationship between each protective factor and PGSI scores and SGHS scores was examined using Pearson *r* correlations for the cishet participants and the LBGTIQ+ participants. As can be seen in Table 22, among the cishet group of participants, both PGSI scores and SGHS scores had small negative correlations with social support and resilience but no significant relationship with cishet community connectedness. This suggests that cishet participants who had higher PGSI scores and/or SGHS scores had less social support and were less resilient.

Among the LGBTIQ+ participant group (Table 22), both PGSI scores and SGHS scores also had small negative correlations with social support which similarly indicated the LGBTIQ+ participants who had higher PGSI scores and/or SGHS scores had less social support. However, no significant correlations were obtained for cishet community connectedness, LGBTIQ+ community connectedness or resilience.

As with hypothesis two, two hierarchical multiple regression analyses predicting 1) PGSI scores and 2) SGHS scores were performed for the cishet group of participants. Mainstream community connectedness was not included in the regression models as it was not correlated with either PGSI scores or SGHS scores. Therefore, the two models included age (as a covariate), resilience, and social support. After running the models using the entire group of cishet participants, the Mahalanobis distances were inspected to determine if there were any multivariate outliers. Using a critical value of 16.266 and an alpha level of .001 (as per guidelines from Tabachnick & Fidell, 2007), the maximum Mahalanobis distance value of 19.275 exceeded the critical value. However, removal of the two outliers did not improve the model and therefore, the two participants were retained for the analyses.

Overall, while controlling for age, the model predicting PGSI scores in the cishet group of participants significantly accounted for 11.2 per cent of variance. Additionally, the overall model for predicting SGHS scores significantly accounted for 9.1 per cent of variance. As can be seen in Tables 23 and 24, when controlling for age among cishet

participants, lower PGSI scores were significantly associated with more resilience and more social support while lower SGHS scores were significantly associated with increased resilience.

Two hierarchical multiple regression analyses predicting 1) PGSI scores and 2) SGHS scores were also performed for the LGBTIQ+ group of participants. Resilience and mainstream community connectedness were not included in the regression models as they were not correlated with either PGSI scores or SGHS scores. LGBTIQ+ community connectedness was also excluded from the models as it had missing data and was not significantly correlated with either gambling variable. Therefore, the two models included age (as a covariate) and social support. After running the models using the entire group of LGBTIQ+ participants, the Mahalanobis distances were inspected to determine if there were any multivariate outliers. Using a critical value of 13.816 and an alpha level of .001 (as per guidelines from Tabachnick & Fidell, 2007), the maximum Mahalanobis distance value of 13.448 did not exceed the critical value thus indicating no outliers.

Among the LGBTIQ+ group of participants, the models predicting PGSI scores and SGHS scores while controlling for age overall significantly accounted for 5.7 per cent and 9.2 per cent of variance, respectively. When controlling for age, lower PGSI scores and lower SGHS scores were significantly associated with more social support (see Tables 23 and 24).

Table 22 Correlations between PGSI scores, SGHS scores, and protective factors for the cisgender and heterosexual participants (to the left of and below the diagonal) and LGBTIQ+ participants (to the right of and above the diagonal)

	Cishet ***M (SD)***	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**
LGBTIQ+ *M* (*SD*)	-	5.2 (6.1)	3.1 (3.2)	2.9 (0.9)	3.5 (1.0)	17.3 (4.4)	18.4 (5.2)
1. PGSI[a]	*8.2 (8.1)*	-	.75	-.01	-.24	-.07	-.03
2. SGHS[b]	*3.8 (3.4)*	.79	-	-.04	-.28	-.13	.05
3. Resilience[c]	*3.4 (0.9)*	-.26	-.27	-	.26	.20	-.14
4. Social support[d]	*3.8 (1.1)*	-.19	-.78	.29	-	.29	.13
5. Mainstream community connectedness[e]	*18.6 (4.6)*	*-.04*	*-.04*	.24	.42	-	.30
6. LGBTIQ+ community connectedness[e †]	-	-	-	-	-	-	-

Note: Correlations for the cishet participants (*n* = 213) are to the left of and below the diagonal in italics. Correlations for the LGBTIQ+ participants (*n* = 172) are to the right of and above the diagonal. Cells in bold indicate significant correlations.

[†]*n* = 170 for LGBTIQ+ community connectedness. *M* = mean. *SD* = standard deviation.

[a]Problem Gambling Severity Index. Score range = 0-27. [b]Short Gambling harms Screen. Score range = 0-10. [c]The Brief Resilience Scale (BRS). Score range = 1-6. [d]The Medical Outcomes Study Social Support Survey (MOS-SS). Score range = 1-5. [e]Connectedness to the LGBT Community Scale. Score range = 7-28.

Table 23 Hierarchical multiple regressions predicting PGSI scores with possible protective factors among cisgender and heterosexual participants and LGBTIQ+ participants

	Cishet				LGBTIQ+			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	3.65 (2.91, 4.38)		9.74	< .001	2.06 (1.34, 2.78)		5.66	< .001
Age (in years)	-.02 (-.03, -.004)	-.18	-2.62	.009	.004 (-.01, .02)	.04	.57	.571
Resilience	-.23 (-.40, -.07)	-.19	-2.81	.005	-	-	-	-
Social support	-.18 (-.31, -.04)	-.18	-2.54	.012	-.24 (-.40, -.09)	-.23	-3.10	.002
R^2	.11				.06			
F	8.80***				5.13**			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p* < .001

Table 24 Hierarchical multiple regression predicting SGHS scores with possible protective factors among cisgender and heterosexual participants and LGBTIQ+ participants

	Cishet				LGBTIQ+			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	9.02 (6.60, 11.43)		7.37	< .001	5.18 (3.05, 7.32)		4.79	< .001
Age (in years)	-.03 (-.07, .02)	-.09	-1.24	.215	.04 (-.01, .08)	.11	1.53	.128
Resilience	-.88 (-1.41, -.35)	-.23	-3.26	.001	-	-	-	-
Social support	-.41 (-.85, .04)	-.13	-1.81	.072	-.87 (-1.33, -.41)	-.27	-3.71	< .001
R^2	.09				.09			
F	6.96***				8.53***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ***p* < .001

Two multivariate regression analyses were conducted to examine whether social support was less pronounced for LGBTIQ+ participants than cishet participants for 1) PGSI scores, and 2) SGHS scores while controlling for age by inspecting the interaction terms. As can be seen in Table 25, social support was not found to be a significantly stronger protective factor for the LGBTIQ+ group of participants than the cishet group of participants. However, as stated above for hypothesis three, there was not enough evidence to reject the null hypothesis and it is possible that with more participants, other significant interactions may have been found.

Table 25 Multivariate regressions predicting PGSI score and SGHS score with social support and LGBTIQ+ identity

	PGSI				SGHS			
	***B* (95% CI)**	***β***	***t***	***p***	***B* (95% CI)**	***β***	***t***	***p***
(Constant)	2.04 (1.75, 2.34)		13.80	< .001	4.08 (3.16, 4.99)		8.75	< .001
Age (in years)	-.01 (-.02, .00)	-.10	-1.94	.053	-.01 (-.04, .02)	-.02	-.45	.656
LGBTIQ+ identity	-.51 (-.72, -.30)	-.24	-4.81	< .001	-.96 (-1.62, -.31)	-.15	-2.90	.004
Social support (centred score)	-.21 (-.35, -.08)	-.21	-3.19	.002	-.57 (-.99, -.16)	-.18	-2.71	.007
Social support x LGBTIQ+ identity interaction	-.04 (-.24, .16)	-.03	-.40	.689	-.33 (-.96, .30)	-.07	-1.02	.308
R^2	.10				.06			
F	10.01***				6.46***			

Note: Rows in bold indicate significant predictors. *B* = Unstandardised beta. CI = confidence interval. *β* = standardised beta. ****p* < .001

Discussion and conclusion

People in LGBTIQ+ communities have been found to have a greater likelihood for engaging in high-risk behaviour such as drug and alcohol use (Roxburgh et al., 2016). Furthermore, preliminary research has found that LGBTIQ+ people are potentially more at-risk for problem gambling than people from the cishet population (Richard et al., 2019; Rider et al., 2018). A primary explanation for this has centered around the fact that LGBTIQ+ communities experience significant levels of minority stress due to living in a heteronormative environment and often having daily experiences of stigma and discrimination (Herek, Gillis, & Cogan, 2015; Meyer, 2003; Sue, 2010; Valdiserri, Holtgrave, Poteat, & Beyrer, 2019). Few studies, however, have examined the psychosocial correlates of problem gambling severity among LGBTIQ+ people and no study has extended the scope to examine the impact of both risk and protective factors on problem gambling severity and gambling-related harms (Birch et al., 2015; Grant & Potenza, 2006). Therefore, this study adds new evidence by examining both risk and protective factors for problem gambling severity and gambling-related harms among people in LGBTIQ+ communities. Furthermore, the inclusion of a comparison group of cishet people enabled an examination of the factors that were more pronounced among LGBTIQ+ communities.

Summary of the key findings

Problem gambling severity and gambling-related harms in LGBTIQ+ communities

Problem gambling severity and gambling-related harms differed significantly between the participant groups with the cishet group scoring higher on the PGSI (i.e. gambling severity) and SGHS (i.e. gambling-related harms) than the LGBTIQ+ group. Although both participant groups were over-represented (compared to the general population) in the PGSI problem, moderate-risk, and low-risk gambling categories and under-represented in the non-problem gambling category, a significantly higher proportion of participants in the LGBTIQ+ group were found to be classified in the non-problem gambling category and a significantly greater proportion of participants in the

cishet group were classified in the problem gambling category. This was unexpected as some research has found evidence that a significantly greater proportion of LGBTIQ+ people report problem gambling when compared with cishet people (Hershberger & Bogaert, 2005; Richard et al., 2019; Rider et al., 2018). While some of the LGBTIQ+ gambling research conducted to date should be interpreted with caution due to the use of secondary analyses using old data sets, single-item gambling measures (Hershberger & Bogaert, 2005), and the use of participant samples with limited generalisability (Richard et al., 2019), the previous findings are consistent with minority stress theory which states sexual and gender minority people have an increased risk for engaging in addictive behaviours to cope with living in a stressful social environment created by discrimination, stigma and prejudice (Chakraborty et al., 2011; Condit et al., 2011b; Meyer, 2003).

In order to interpret these unexpected findings, several differences in key demographic characteristics between the two groups need to be considered. First, 96.5 per cent of the cishet group identified as male and men tend to gamble, and report gambling-related problems, at much higher rates than women (Dowling, 2013; Dowling & Oldenhof, 2017; Hing, Russell, Tolchard, & Nower, 2014; Merkouris et al., 2016). This imbalance in gender between the two samples may have inflated the cishet sample's gambling behaviour in comparison to the LGBTIQ+ group. It is possible if there had been more of a representative sample of gamblers (i.e. more women) in the cishet sample, then overall the cishet group may have had lower gambling severity than the LGBTIQ+ community, as predicted. Second, the LGBTIQ+ sample were more highly educated than the cishet sample and research has found that people with a higher level of education tend to gamble less (Acil Allen Consulting, Deakin University, Central Queensland University, & The Social Research Centre, 2017; Husky, Michel, Richard, Guignard, & Beck, 2015; Merkouris et al., 2016; Scherrer et al., 2007). Third, in this sample, a significantly greater proportion of LGBTIQ+ participants were unemployed and seeking work while a greater proportion of the cishet participants were employed full-time. People in LGBTIQ+ communities may not have the same financial stability as people in cishet communities and therefore, may not be in a position to gamble as frequently. This is supported by evidence that LGBTIQ+ people are more likely to experience unequal employment opportunities and discriminatory attitudes in the workplace than cishet people (Budge, Tebbe, & Howard, 2010; Fric, 2019; Herek, 2009). LGBTIQ+ people are also more likely to end up in lower paying jobs than they are qualified for as they find it difficult to secure employment with a non-discriminatory employer (Badgett, Waaldijk, & Rodgers, 2019; Becker, 1971). Gambling may therefore be deemed to be a waste of money when there are other financial responsibilities to prioritise, such as housing, children, and living expenses. Therefore, the LGBTIQ+ participants in the current study may not have been in a stable financial position to gamble at the same rate as the cishet participants and hence were less likely to report gambling problems or harms. Yet, while this may explain why the LGBTIQ+ group were less likely to report problem gambling, it is inconsistent with the literature on gambling-related harms which has found that lower socio-economic status is associated with experiencing more harms (van der Maas, 2016). Further research is needed to examine the impact of financial capacity on problem gambling severity among LGBTIQ+ people. Nonetheless, approximately 28 per cent of the LGBTIQ+ group consisted of people classified in the problem gambling category on the PGSI, indicating that, at least in this sample, gambling-related problems was an issue. Caution in interpreting these findings from this convenience sample is warranted and further research with population-representative studies is needed to examine the role of these important demographics in shaping gambling behaviours and their differential impacts on the LGBTIQ+ community.

Examination of the potential risk and protective factors

The socio-ecological model (Dahlberg & Krug, 2002) is a four-level framework which acknowledges the complex interaction between individual, relationship, community, and societal factors in the development of problem gambling. This framework will be applied to guide the discussion of the results relating to the risk and protective factors. It is important to understand how these four groups of factors are related to gambling among LGBTIQ+ people in order to develop an effective intervention or support service.

Individual factors

Individual factors refer to those relating to a person's biological and personal history which may influence their engagement with gambling (Dahlberg & Krug, 2002). This study examined the influence of seven potential individual-level risk factors (erroneous gambling cognitions, positive and negative gambling expectancies, alcohol use, drug use, mental health and impulsivity) and one potential individual-level protective factor (resilience) on problem gambling severity and gambling-related harms. The results revealed that erroneous gambling cognitions and negative gambling expectancies significantly predicted a higher severity of problem gambling in both the cishet and the LGBTIQ+ groups. Meanwhile, negative gambling expectancies was the only significant predictor for gambling-related harms in both participant groups. Analyses examining which risk factors were more pronounced among the LGBTIQ+ participants than the cishet participants revealed that positive gambling expectancies was a more pronounced risk factor for problem gambling severity and related harms among the LGBTIQ+ group.

This was the first study to examine erroneous gambling cognitions and gambling outcome expectancies in LGBTIQ+ communities. The current study's finding that high levels of erroneous gambling cognitions significantly predicted problem gambling severity is consistent with the broader gambling literature which has similarly found that erroneous gambling cognitions are associated with problem gambling (Browne et al., 2019; Emond & Marmurek, 2010; Hing & Russell, 2020; Johansson, Grant, Kim, Odlaug, & Götestam, 2009; Myrseth et al., 2010; Russell, Hing, & Browne, 2019). Inability to stop gambling beliefs was found to be a significantly more pronounced risk factor for the LGBTIQ+ participants than the cishet participants. Some of the other forms of erroneous cognitions, such as the illusion of control, may also be specific risk factors for LGBTIQ+ people and future research may be needed to further examine these. For example, although the survey results did not find illusion of control to be a significant predictor of problem gambling severity and gambling-related harms, it was nonetheless significantly correlated with both of these gambling outcome measures. Erroneous gambling cognitions have not been examined in LGBTIQ+ communities and therefore, these findings can be used as a comparative benchmark for future research.

The finding that negative gambling expectancies predicted problem gambling severity and related harms was also consistent with other gambling research which has similarly found negative gambling expectancies to be a risk factor for problem gambling severity and experiencing gambling-related harms (Browne et al., 2019; Dowling et al., 2018; St-Pierre et al., 2014; Wickwire et al., 2010). The finding that positive gambling expectancies were a stronger predictor of problem gambling severity and related harms in the LGBTIQ+ group than the cishet group was a new finding that has not been examined elsewhere. Positive gambling expectancies may have been a stronger risk factor for the LGBTIQ+ group than the cishet group as LGBTIQ+ people would likely benefit more from 1) winning money as they are more likely to experience financial hardship than cishet people (Badgett et al., 2019; Becker, 1971; Fric, 2019); and 2) escaping life stressors as they are more likely to experience stress and adversity due to their minority status (Meyer, 2003).

Consistent with previous literature, the LGBTIQ+ group reported significantly higher levels of psychological distress than the cishet group (R. Brown et al., 2015; Kamen et al., 2014; Marshal et al., 2011). The finding that psychological distress was found to be a more pronounced risk factor for problem gambling severity and gambling-related harms among the cishet participants than the LGBTIQ+ participants suggests that it may not be a significant risk factor for LGBTIQ+ participants as it was not significantly correlated with problem gambling severity. This is consistent with the findings from Birch and colleagues (2015) as they similarly did not find psychological distress to be associated with problem gambling in their sample of LGBTI participants.

Interestingly, hazardous alcohol use was significantly higher in the cishet group than the LGBTIQ+ group which is not consistent with the literature (R. Brown et al., 2015; Hughes et al., 2010; Hughes et al., 2015; Reisner et al., 2013; Roxburgh et al., 2016; Slater, Godette, Huang, Ruan, & Kerridge, 2017). It is, however, likely that this unexpected finding may be due to the high proportion of men in the current study. For example, while research has consistently found LGBTIQ+ people to have a greater risk for hazardous drinking than cishet people (Roxburgh

et al., 2016; Slater et al., 2017), subgroup analyses have found these disparities to be more pronounced among LGBTIQ+ women than men (McCabe, Hughes, Bostwick, West, & Boyd, 2009; Trocki, Drabble, & Midanik, 2009). Moreover, mixed findings have been reported for comparisons between sexual minority men and heterosexual men in population-level study samples. For example, while one study found significantly more bisexual men (56.3 per cent) consumed five or more drinks in one day at least once in the past year compared with heterosexual men (35.1 per cent; Ward, Dahlhamer, Galinsky, & Joestl, 2014), another found no significant differences in high-risk alcohol use between gay/bisexual men and heterosexual men (Roxburgh et al., 2016). It is possible, however, that the inclusion of trans and gender diverse people in the current study may explain the lower rates of alcohol use in the LGBTIQ+ participant group. For example, research has found a significantly greater proportion of cisgender men (10.9 per cent) to consume five or more drinks at a time than trans women (7.0 per cent) and genderqueer people (8.0 per cent; Smalley, Warren, & Barefoot, 2016). Therefore, the significantly lower hazardous alcohol use in the LGBTIQ+ group may be due to the high proportion of men in both participant groups and/or the diversity of subgroups which do not present the same risks for hazardous drinking.

Higher levels of impulsivity in both participant groups were found to be significantly correlated with problem gambling severity and gambling-related harms. Furthermore, the LGBTIQ+ group reported a significantly greater level of impulsivity than the cishet group. This finding was consistent with the two other studies which have examined gambling risk factors using LGBTI samples. For example, Grant and Potenza (2006) found gay and bisexual male problem gamblers to be more likely to report an impulse control disorder than heterosexual men. Moreover, Birch and colleagues (2015) found LGBTI problem gamblers to report significantly lower levels of self-control than non-problem gamblers.

Due to missing data and ambiguous responses, it was not possible to examine drug use as a predictor of problem gambling severity or gambling-related harms. Nonetheless, the descriptive analyses revealed similar proportions of participants in each group had used drugs in the previous 12 months. This was unexpected as research has demonstrated a significantly higher risk of drug use among LGBTIQ+ people compared with cishet people (Capistrant & Nakash, 2019; Roxburgh et al., 2016). Indeed, Grant and Potenza's (2006) study found that gay and bisexual male problem gamblers were more likely to have a substance use disorder than cishet male problem gamblers (Grant & Potenza, 2006). Therefore, further analyses were performed to examine the relationship between previous 12-month drug use (yes/no), and PGSI scores and SGHS scores in the cishet group and LGBTIQ+ group separately (see Table E.2 in Appendix E). Analyses revealed that among cishet participants, previous 12-month drug use was significantly associated with higher PGSI scores and higher SGHS scores. However, these relationships were not significant among the LGBTIQ+ participants. The cishet group's results were consistent with the gambling literature which has found increased levels of substance use among people with gambling problems, and significant relationships between substance use and problem gambling severity (Dowling et al., 2015; Dowling et al., 2017; Geisner et al., 2016; Lorains et al., 2011). However, the non-significant outcomes in the LGBTIQ+ group were not consistent with a similar study by Birch and colleagues (2015) in which LGBTI problem gamblers reported significantly higher levels of drug use compared with non-problem gamblers.

Resilience was the only individual-level factor that was examined as a potential protective factor. In the cishet group, resilience was found to be a significant protective factor as higher levels of resilience predicted lower levels of problem gambling severity and fewer gambling-related harms. This was consistent with the general gambling literature which has similarly found higher levels of resilience to be associated with lower levels of problem gambling severity (Canale et al., 2019). However, resilience could not be examined as a potential protective factor in the LGBTIQ+ group as it was not significantly associated with PGSI scores or SGHS scores. This may be due to the low scores obtained on the Brief Resilience Scale which is consistent with other research (R. Bush, 2019). Indeed, the LGBTIQ+ group reported significantly lower levels of resilience compared with the cishet group (see Table 4). This was expected as resilience helps to buffer against stress and adversity and reduces a person's need to use unhealthy coping mechanisms, such as gambling (Figueroa & Zoccola, 2015).

Relationship factors

This group of factors refers to relationships with peers, intimate partner/s and family members that have the ability to influence and shape a person's behaviour as they contribute to their range of experience (Dahlberg & Krug, 2002; Dowling et al., 2017). This study examined the role of perceived peer gambling norms as a potential risk factor and social support as a potential protective factor against problem gambling severity and related harms. Peer gambling norms could not be examined as a predictor of problem gambling severity and/or gambling-related harms as the potential risk factor was not correlated with PGSI scores or SGHS scores. However, group comparisons of perceived peer gambling norms revealed a significantly greater proportion of LGBTIQ+ identified participants either did not believe any of their friends gambled or they believed two of their friends gambled while a significantly greater proportion of cishet participants believed at least four of their friends gambled. While high levels of peer gambling norms were expected among the cishet participants (Raisamo & Lintonen, 2012), no other studies have examined this risk factor in LGBTIQ+ communities. Our finding that many LGBTIQ+ identified participants perceived gambling to be low or non-existent among their friends may be explained by research examining the influence of peer norms on alcohol and drug use in LGBTIQ+ communities. That is, LGBTIQ+ people have been found to have a greater risk for alcohol and drug use if they perceive the use and acceptance of alcohol and drugs to be higher in their community (Boyle, LaBrie, & Witkovic, 2016; Demant, Hides, White, & Kavanagh, 2018b). Many LGBTIQ+ venues and events are licensed and, therefore, provide an opportunity for alcohol and drug use. Yet, these same venues do not include EGMs. This not only reduces the likelihood that LGBTIQ+ people will gamble when they are at a social venue but also means they are less likely to know whether their friends gamble or not. Thus, it may not be surprising that the LGBTIQ+ participants believed that few, if any, of their friends gambled.

The finding that many of the LGBTIQ+ participants perceived gambling to be low or non-existent among their friends could also be explained by the potential desire of LGBTIQ+ people to avoid experiencing further stigma (in addition to sexuality and/or gender-based stigma) by hiding their gambling. This is supported by research which has found people in LGBTIQ+ communities to be more likely to avoid accessing support services due to concerns of discrimination and being stigmatised for not only their sexual and/or gender identity but also their presenting issue (Koh et al., 2014; McNair, 2014; McNair & Bush, 2016). This is similar to the gambling literature examining stigma as people with gambling problems also have a tendency to internalise stigmatising attitudes which often leads to feelings of shame and reluctance to seek support due to concerns about the healthcare professional's attitudes (Baxter, Salmon, Dufresne, Carasco-Lee, & Matheson, 2016; Hing, Nuske, Gainsbury, Russell, & Breen, 2016). Therefore, in the current study, people in the LGBTIQ+ group may have had more friends who gambled, but their friends may have kept it hidden due to concerns of stigmatising attitudes and judgement. Although this behaviour is also true of people in cishet communities (Carroll, Rodgers, Davidson, & Sims, 2013; Fulton, 2019), it may be more common among LGBTIQ+ people who are reluctant to receive another stigmatising and marginalising label.

Consistent with the literature, the LGBTIQ+ group reported significantly lower levels of social support than the cishet group (R. Bush, 2019). This may be because LGBTIQ+ people are more likely to experience rejection from their family through a withdrawal of concern, love, or support, in addition to physical and/or psychological harmful behaviour (Carastathis, Cohen, Kaczmarek, & Chang, 2016; Rohner, 2004). Family rejection and a loss of social support has been associated with negative outcomes, such as depression, and hazardous alcohol and drug use (Rothman et al., 2012). It was therefore expected that having a social support network (family and/or friends) would be a protective factor against problem gambling severity and gambling-related harms particularly among the LGBTIQ+ identified participants as positive social networks have been found to buffer rejecting reactions (Carastathis et al., 2016). Our results were consistent with this hypothesis as more social support in the LGBTIQ+ group predicted less severe problem gambling and fewer gambling-related harms. In the cishet group, increased levels of social support was found to be a protective factor against problem gambling severity which is consistent with the literature (Savolainen, Sirola, Kaakinen, & Oksanen, 2019; Weinstock & Petry, 2008); yet, there was no evidence that social support was a protective factor against gambling-related harms.

Community factors

Community factors refer to the settings in which social relationships occur, such as, neighbourhoods and workplaces (Dahlberg & Krug, 2002). Connectedness to the LGBTIQ+ and/or mainstream community were examined as potential community-level protective factors against problem gambling severity and/or gambling-related harms. Community connectedness was not significantly correlated with PGSI scores or SGHS scores and therefore, could not be analysed as a potential protective factor. The non-significant findings for the LGBTIQ+ group may be explained by the low community connectedness scores which may have made it difficult to detect a relationship. Although 'LGBTIQ+ communities' are referred to as a homogenous group, the individuals and groups within these communities vary in their definition of community and their level of connectedness (Frost & Meyer, 2012). For example, people who identify as bisexual often report less connectedness to the LGBTIQ+ community than other sexually diverse people as they experience discrimination from other subgroups in the different LGBTIQ+ communities and cishet people because of their attraction to more than one gender (Barker et al., 2012; Frost & Meyer, 2012; Herek, 2002). Indeed, not all LGBTIQ+ people feel connected to or welcomed by LGBTIQ+ communities, and some people may live in a rural area where there are no LGBTIQ+ communities. These participants may therefore experience low levels of connectedness.

Societal factors

Societal factors refer to those which create and maintain disparities between social groups. Two potential societal-level risk factors were examined specifically among the LGBTIQ+ identified participants: perceived stigma and discrimination. However, discrimination was not significantly correlated with problem gambling severity or related harms and perceived stigma only had a weak significant correlation with gambling-related harms. Perceived stigma and discrimination were believed to be risk factors for problem gambling severity and related harms as these two factors have been found to create a stressful social environment for LGBTIQ+ people which increases their risk for engaging in unhealthy behaviours (Meyer, 2003). The weak correlation between discrimination and gambling-related harms suggests LGBTIQ+ people who experience more sexual and gender identity-related discrimination also experience more gambling-related harms. The other non-significant correlations may indicate that relationships do not exist between the factors, however, further research is needed.

Implications of the study

LGBTIQ+ people may feel reluctant to acknowledge their gambling due to concerns about receiving another stigmatising label. This may explain the low numbers of perceived peer gambling in the LGBTIQ+ group. Thus, stigma is an issue which should be addressed in health promotion campaigns. Indeed, Miller and Thomas (2018) argue that current gambling campaigns which ask people to 'gamble responsibly' normalise gambling and portray people with gambling problems as being impulsive and irresponsible. Therefore, rather than encouraging help-seeking behaviour, the campaign message increases self-blame and further promotes the misconception that people with recreational gambling and problem gambling are different (Miller & Thomas, 2018). This is particularly damaging for people in LGBTIQ+ communities as they already experience stigmatisation and marginalisation. Yet, health promotion campaigns have the potential to reduce stigma for gambling (Thomas, Bestman, Pitt, David, & Thomas, 2016). Recent health promotion campaign messages have aimed to reduce the stigma attached to gambling by shifting the focus from problem gambling to the harms related to gambling. While diagnostic classification based on screening and identifying cases based on symptom clusters incorporating behaviours and negative consequences remains important, from a health promotion perspective, messaging based on gambling harms may be less stigmatising as it reduces perpetuating stereotypes. In doing so, however, there is a need to avoid conflating problem gambling symptomatology and characteristics with the potential negative consequences of gambling. Problem gambling and harm are closely coupled but conceptually distinct constructs.

Promoting these messages in LGBTIQ+ communities may reduce gambling-related harms and reduce the risk for problem gambling by reducing the amount of stigma attached to gambling, LGBTIQ+ people may be more likely to access support services as they may feel less concerned about the healthcare professional's attitude or experiencing judgement about their gambling and/or identity, both of which have been cited as help-seeking barriers in both the gambling (Derevensky & Gilbeau, 2015; Itäpuisto, 2019; Suurvali, Hodgins, & Cunningham, 2010) and LGBTIQ+ (Koh et al., 2014; McNair, 2014) literatures.

Strengths and limitations

The main strength of this study was the new information it added to the field on gambling in LGBTIQ+ communities. Few studies have been conducted to understand problem gambling among LGBTIQ+ people and this was the first to also include gambling-related harms. This was also the first study to 1) examine problem gambling severity *and* related harms in Victorian and Australia-wide LGBTIQ+ communities; and 2) use an LGBTIQ+ participant sample to extend the scope beyond potential risk factors and also examine potential protective factors against problem gambling severity and related harms. Lastly, the large sample size was a significant strength of this study especially considering that minority populations are typically hard to reach (Moradi, Mohr, Worthington, & Fassinger, 2009; Sadler, Lee, Seung-Hwan Lim, & Fullerton, 2010).

Nonetheless, there were three main limitations in this study. The first limitation was the convenience sampling employed in the current study. While this achieved a large sample of LGBTIQ+ and participants experiencing gambling-related problems and harms, there was a large proportion of cishet men in the study as very few cishet women volunteered to complete the survey. This likely had an impact on the outcomes as research has found cishet men gamble more frequently and spend more than cishet women (Delfabbro, 2012; Hing et al., 2014). Cishet male gamblers are more likely to participate in strategic, skill-based, and competitive forms of gambling, such as table games, informal private betting, race and sports betting, and EGMs (Dowling & Oldenhof, 2017; Hing et al., 2014; Merkouris et al., 2016; Odlaug, Marsh, Kim, & Grant, 2011), while cishet female gamblers are more likely to prefer non-strategic, chance-based gambling activities such as lottery-type games, raffles, and EGMs (Delfabbro, 2012; Delfabbro, King, & Griffiths, 2014; Hing et al., 2014; Odlaug et al., 2011). Furthermore, in a Victorian study, cishet male gamblers were found to be twice as likely to report lifetime problem gambling and/or past year problem gambling compared with cishet women (Hing et al., 2014). These cishet gender differences suggest the cishet participant group may have included a significantly greater proportion of people with gambling problems and more participation in skill-based gambling activities due to the almost entirely cishet male sample. Previous research on cishet gender differences in mental health among problem gamblers are mixed which suggests the inclusion of more cishet women may have influenced our findings on potential risk factors for problem gambling severity and related harms in both participant groups. That is, while an earlier study found similar levels of mental health functioning between cishet female and cishet male gamblers (Potenza, Maciejewski, & Mazure, 2006), a more recent Victorian study found depression and anxiety were proportionally higher amongst cishet female gamblers than cishet male gamblers, and cishet women had significantly higher levels of psychological distress and were more likely to have a severe mental disorder compared with cishet men (Hing et al., 2014). It remains unclear why this study predominantly attracted male cishet participants; this is not generally the case in gambling research. Future research could use a representative sampling method to achieve an appropriate comparison group.

A second limitation was the cross-sectional nature of the study. We chose to use the term 'risk factor' and 'protective factor' to refer to variables which may be associated with an increased risk and decreased risk for developing problem gambling/gambling harms, respectively. However, risk and protective factors are defined as antecedent variables or conditions that can predict psychiatric disorders (Coie et al., 1993; Farrington & Ttofi, 2011; Kazdin et al., 1997). While cross-sectional studies provide some insight into the factors associated with problem gambling, prospective investigations have the potential to yield exceptionally powerful data relating to the processes by which risk and protective factors influence the emergence and course of problem gambling (Coie et al., 1993). Relatedly, the current study has examined and identified compensatory factors that have a direct

negative main effect with problem gambling/gambling harms rather than protective factors that interact with a risk factor to buffer or mitigate its effects (Coie et al., 1993; Dickson et al., 2008; Farrington & Ttofi, 2011; Loxley et al., 2004; Lussier et al., 2014). Future longitudinal research is required to definitively identify risk, compensatory, and protective factors in the LGBTIQ+ population.

The final limitation is that only three people with intersex variations volunteered to participate in this study. The study does not currently account for experiences of people with intersex variations, and future research should focus on this population group.

Conclusions

This was the first study to examine both risk and protective factors for problem gambling severity and related harms in an Australia-wide LGBTIQ+ sample with a cishet comparison group. As such, the outcomes from this study add new evidence to the gambling literature which can be used as comparative benchmarks for future research. The LGBTIQ+ sample reported significantly lower problem gambling severity and gambling-related harms than the cishet population. Nonetheless, approximately 28 per cent of LGBTIQ+ participants in this study were classified as problem gamblers and 68 per cent of this group experienced a range of gambling-related harms. Moreover, they experienced other issues, namely erroneous cognitions about gambling and more negative expectancies about gambling, which significantly increased their risk for problem gambling and/or experiencing gambling-related harms. In contrast, having more social support was found to significantly protect them against problem gambling and related harms. Positive gambling expectancies were identified as a more pronounced risk factor for problem gambling severity and related harms among the LGBTIQ+ group than the cishet comparison group. Population-representative studies are needed to examine the differences in gambling behaviour between cishet and LGBTIQ+ samples and longitudinal research is required to definitively identify risk and protective factors for LGBTIQ+ communities. Future research could also focus on developing health promotion campaigns and messages which educate the LGBTIQ+ communities about the risks associated with gambling activities and highlight the harms of gambling to reduce the stigma attached to gambling.

Study Two: Exploratory pilot study of LGBTIQ+ lived experiences with gambling

Background

Previous research has found evidence of problem gambling among LGBTIQ+ people (Birch et al., 2015; Grant & Potenza, 2006; Hershberger & Bogaert, 2005; Richard et al., 2019; Rider et al., 2018). People in LGBTIQ+ communities tend to experience common risk factors for problem gambling, such as mental health issues (Gonzales & Henning-Smith, 2017; Hughes et al., 2010) and hazardous alcohol and drug use (R. Brown et al., 2015; J. N. Fish et al., 2017; Hughes et al., 2010; Roxburgh et al., 2016), at higher levels than people in cishet communities. This is typically a result of living in a stressful social environment created by discrimination, prejudice, stigma, and violence (Bayer, 1981; M. Gillespie et al., 2007; Langham et al., 2016; Schlagintweit, Thompson, Goldstein, & Stewart, 2017). The lived experiences of LGBTIQ+ people are important to consider when researching unhealthy behaviours as they contextualise and bring meaning to the person's behaviour. For example, research examining the lived experiences of LGBTIQ+ people who hazardously use alcohol has found that their drinking is significantly impacted by their of experiences of internalised stigma, discrimination and the stress of coming out (Baiocco, D'Alessio, & Laghi, 2010; English, Rendina, & Parsons, 2018; Slater et al., 2017). Yet, to date, no previous studies have examined the lived experiences of LGBTIQ+ people who gamble using qualitative methods

The lived experiences of LGBTIQ+ people

When discussing issues of addiction and mental health among LGBTIQ+ people, it is important to understand the social context in which they are living as it frames the discussion of such issues. The prejudice, discrimination and homophobia which still exists in contemporary society needs acknowledgement in order to fully understand the environment that LGBTIQ+ people must navigate whilst working through personal, interpersonal and health issues.

Interpersonal and social heterosexism and discrimination

LGBTIQ+ people typically do not benefit from the same equal opportunities or treatment as cishet people. Historically, LGBTIQ+ communities have experienced oppression in different forms through discriminatory behaviour and laws. While the difficulties that are faced by these populations are slowly being addressed in Australia, LGBTIQ+ people still encounter many forms of social oppression through acts of discrimination and heterosexist attitudes. Heterosexism is defined as "a social system built on heteronormative beliefs, values and practices in which non-heteronormative sexualities and gender identities and people with intersex variations are subject to systemic discrimination and abuse" (Waling et al., 2019, p. 55). Stereotypical images of LGBTIQ+ people combined with minimal awareness and understanding fuels heterosexist attitudes and homophobia. Heterosexist acts manifest in different forms but are interconnected by the central goal of discrimination and the exclusion of LGBTIQ+ people from society (Neisen, 1993). Examples include prejudicial treatment by family and friends, unequal employment opportunities, and disparaging comments and jokes at the expense of people in sexual and gender minority communities (Budge et al., 2010; Fric, 2019; Neisen, 1993; Weber, 2008).

Threats and acts of violence are a part of many LGBTIQ+ people's everyday lives. In many cases, discrimination is expressed through bullying, harassment, physical abuse, and disparaging comments and jokes (Harper & Schneider, 2003). For example, a 2010 national Australian survey which received responses from 3,134 same-sex attracted and gender questioning young people (57 per cent female; mean age = 17 years) found a large proportion

of respondents had experienced verbal abuse (61 per cent) and physical abuse (18 per cent; Hillier et al., 2010). These findings are comparable to a survey by the Australian Human Rights Commission (AHRC) in which 71.79 per cent or respondents had ever experienced violence, harassment or bullying due to their sexual orientation, gender identity or intersex status (AHRC, 2015).

In line with minority stress theory (Meyer, 2003), daily experiences of heterosexism and discrimination likely increase the risk of LGBTIQ+ people engaging in high-risk activities to cope with the unique and social-based stress which is experienced in addition to other stressors that are typically experienced by people in cishet communities. However, to date, no studies have qualitatively examined the impact of minority stress on gambling among LGBTIQ+ people.

Heterosexism and discriminatory practices by mental health professionals

Mental health professionals may engage in heterosexist and discriminatory practices against LGBTIQ+ people, which can have a serious impact on not only the care LGBTIQ+ people receive but also their willingness to access services. The negative attitudes and prejudice of some mental health professionals and social services date back to historical, social, economical, political, and religious beliefs that LGBTIQ+ people were fundamentally unhealthy and unnatural (Warner, 1993). During the 1960s and 1970s, homosexuality was associated with psychopathology and was accordingly included in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; Bayer, 1981). Mental health professionals would attempt to "cure" sexual minority people with treatments such as behavioural aversion therapy (G. Smith, Bartlett, & King, 2004) and religious institutions would engage in conversion therapy practices (Jones, Brown, Carnie, Fletcher, & Leonard, 2018). Although not all contemporary mental health professionals hold negative attitudes towards those of diverse sexuality and gender identities, many approach LGBTIQ+ healthcare needs the same as they would for cishet people due to a lack of knowledge (J. Fish, 2006). Consequently, many LGBTIQ+ people are not receiving appropriate support and treatment and are left feeling frustrated and invisible as they are assumed to be heterosexual and/or cisgender (J. Fish & Bewley, 2010; Rozbroj, Lyons, Pitts, Mitchell, & Christensen, 2014).

Heterosexist and cissecist 'unconscious bias' is expressed through language and healthcare provision which assumes the client is heterosexual and cisgender, and neglecting to ask the client's sexual orientation or gender identity (AHRC, 2015). The negative impact of heterosexism and cissexism can lead to shame (Neisen, 1993) and consequently place the individual at risk for engaging in unhealthy behaviours such as problem gambling (Baxter et al., 2016; Hing et al., 2016). Indeed, health professionals have been found to report discomfort with sexual and/or gender diverse patients. For example, an Australian study exploring physician bias (n = 409) found only just under half of participants felt comfortable working with sexual minority patients (Khan, Plummer, Hussain, & Minichiello, 2008). Mental healthcare graduate students have similarly been found to have negative attitudes and antigay prejudice towards lesbians and gay men (Kissinger, Lee, Twitty, & Kisner, 2009; Korfhage, 2006). Moreover, sexual minority patients in the health system have reported experiences of overt expressions of discrimination, including refusal of treatment, verbal abuse, health professionals ignoring the negative impact of living in a homophobic and heterosexist society minimising the person's sexuality, and ascribing health issues to the person's sexuality (Institute of Medicine, 2011; McCann & Sharek, 2014; Welch, Collings, & Howden-Chapman, 2000).

Negative attitudes about diverse sexuality and gender identity are related to stigma. Stigma has been defined as labelling, stereotyping, separation, loss of status, and discrimination which co-occurs in a situation in which one or more individuals are in a position of power (Link, Yang, Phelan, & Collins, 2004). Awareness of society's opinion of sexual and gender minority groups, including expectations of stigma, is described as 'felt stigma' (Herek et al., 2015). This can lead to LGBTIQ+ people avoiding healthcare, difficulty communicating with providers (Bonvicini & Perlin, 2003), and reluctance to disclose sexual and/or gender minority status (Durso & Meyer, 2013) due to concern that the healthcare professional or mental health professional will discriminate against them because of their sexual orientation (Neville & Henrickson, 2006).

Research has therefore consistently demonstrated that LGBTIQ+ people are reluctant to access health and support services due to previous negative experiences and concerns of experiencing discriminatory and stigmatising attitudes (Koh et al., 2014; McNair, 2014; Poteat, German, & Kerrigan, 2013). However, research is yet to examine the experiences of LGBTIQ+ people accessing support for their gambling.

The heteronormative culture of gambling in Australia

In Australia, gambling and the spaces it is likely to occur are traditionally masculine and heteronormative. Indeed, Australian advertisements tend to focus on heterosexual and traditionally masculine Australian identities, values, beliefs and practices (for an overview of the history of masculinity in Australia, see Waling, 2020), which may isolate most LGBTIQ+ people or make gambling venues feel inaccessible (Deans, Thomas, Daube, Derevensky, & Gordon, 2016). This is especially true of sports betting which is described as a boisterous and masculine leisure activity (Lamont & Hing, 2019), and is advertised in Australia using heteronormative tropes such as sexualised and objectified imagery of women, mateship, power, control, and social superiority (Deans et al., 2016).

Many of the gambling spaces in Australia are based in pub locales which may be perceived as unsafe for LGBTIQ+ people who are therefore more likely to frequent social spaces that are known to be LGBTIQ+ friendly (Gorman-Murray & Nash, 2016). For some, participation in the LGBTIQ+ community means, “attending events sponsored by LGBT community organisations, visiting bars or clubs that cater to LGBT individuals, and utilising media focused on LGBT individuals” (Feinstein et al., 2017, p. 1412). This type of connection provides LGBTIQ+ people with positive and affirming social connections (Rosario et al., 2001). Attending events nurture feelings of safety, community support, comfort, and self-acceptance (Condit, Kitaji, Drabble, & Trocki, 2011a; Demant, Hides, White, & Kavanagh, 2018a; Gruskin et al., 2007; Parks, 1999). While LGBTIQ+ social events typically involve alcohol and/or occur in drinking locations such as bars and clubs (Chow et al., 2013; Parks & Hughes, 2007; Wilkerson, Shenk, Grey, Rosser, & Noor, 2015), and have therefore been associated with a higher risk for hazardous substance use (Demant et al., 2018a; Green & Feinstein, 2012; Gruskin et al., 2007), these same bars and clubs do not provide similar opportunities for unplanned gambling due to an absence of EGMs. Therefore, while attending bars and pubs has been found to increase the risk for problem gambling among the general community due to increased access to EGMs (Griffiths, 1993, 1999; Productivity Commission, 2010), the same may not be true for LGBTIQ+ people. However, the impact of the heteronormativity of gambling spaces and activities on gambling among LGBTIQ+ people has not yet been examined.

Significance of this study

This pilot exploratory study aimed to address the gaps in the literature using interviews to gain an understanding of the lived experiences of LGBTIQ+ people in relation to their gambling behaviour, the ways in which their experiences as a LGBTIQ+ person may have influenced their gambling, and their experiences with accessing gambling support. This is a novel contribution to the gambling literature as no other studies have qualitatively examined these issues in LGBTIQ+ communities.

Methodology

Study Two used a descriptive exploratory qualitative approach (Polit & Beck, 2009). This approach was useful given this was a pilot study. Thus, it allowed for a naturalistic inquiry of the lived experiences of the participants and for the findings to be presented in comprehensive summaries which can inform future research. As such, Study Two involved conducting interviews to garner LGBTIQ+ peoples’ experiences of gambling, previous help-seeking behaviour, and how they perceived their sexual and/or gender identity was connected to their gambling.

Key stakeholders were also interviewed to further explore whether gambling is a problem in LGBTIQ+ communities from a health worker and service provider's perspective. This pilot exploratory qualitative study provided the opportunity for an open exploration of participants' understandings and experiences, resulting in a great depth and richness to their subjective accounts. The interviews provided an opportunity to hear from people who belonged in the smaller and difficult-to-reach subgroups in LGBTIQ+ communities, such as those who identify as trans and gender diverse, to ensure their lived experience was qualitatively represented. The findings from the LGBTIQ+ participants and the key stakeholders are combined rather than presented separately as key stakeholders are often LGBTIQ+ peers with similar lived experiences.

Aim

The overall aim was to understand the lived experiences of LGBTIQ+ people in relation to gambling behaviour, pathways to gambling and their views regarding support for gambling.

Research questions

1. How might LGBTIQ+ people characterise or understand their engagement with gambling practices?
2. How might experiences of discrimination, prejudice, stigma and/or harassment intersect with gambling experiences of LGBTIQ+ people?
3. Why might a LGBTIQ+ person choose, or not choose, to access services for potential concerns with their gambling practices, and what factors influence these decisions?

Recruitment

Following completion of the online survey in Study One, LGBTIQ+ participants were directed to a separate page which offered them the opportunity to express their interest to participate in an interview. To increase the number of interviews (as well as the number of problem gamblers being interviewed), participants were also recruited via advertisements on social media.

Key stakeholders were recruited through clinic/service managers and through word of mouth and included therapeutic counsellors and other health workers in both LGBTIQ+ and mainstream health clinics and services.

Procedure

Once participants had agreed to an interview, a suitable time was arranged. The semi-structured interviews were conducted over the telephone and their duration ranged from 21 to 51 minutes. Interviewed participants received a $20 retail voucher to thank them for their time.

The semi-structured key stakeholder interviews were also conducted over the telephone. A suitable time was arranged once participants had signed and returned their written consent (Plain Language Statement and Consent form attached in Appendix F). The duration of these interviews ranged from 26 to 48 minutes.

All interviews were audio-recorded and transcribed verbatim by *Pacific Transcription*, an Australian transcription service. The interview schedules are attached in Appendix G.

Analysis

The transcripts were analysed using thematic analysis approach to identify the main themes raised during the discussions. This was performed using Braun and Clarke's (2006) guidelines which stress the importance of employing a replicable methodology when conducting qualitative research. The six phases of analysis outlined by Braun and Clarke (2006) were completed and are outlined in Table 26. First, the researcher who conducted the interviews (Bush) became familiar with the data by reading and re-reading the transcripts. The researcher then produced a list of initial codes from the data before generating broader themes. A second member of the research team (Waling) independently assessed the codes and themes to increase the rigor of the data analysis (Serry & Liamputtong, 2013). Once agreement had been reached, the themes were refined based on discussions between the two researchers before producing the report which is presented below. Pseudonyms have been used for participants throughout.

Table 26 Phases of thematic analysis for interview outcomes

Phase	Description of the process
1. Familiarisation with the data	The Principal Researcher made notes during and after each interview. The audio-files were transcribed verbatim by *Pacific Transcription* before the Principal Researcher read and re-read them.
2. Generate codes	Paragraphs were copied from the transcripts into a new word document and organised under the interview questions and different colours were used to identify initial codes. These were created based on key features, such as, positive or negative experiences with support services, substance use, and mental health issues.
3. Search for themes	Initial themes were identified and labelled by the Principal Researcher. These consisted of the types of engagement with gambling, the pathways to gambling, and issues relating to access to support.
4. Review themes	The codes and themes were independently reviewed by a second member of the research team (Waling) to ensure they accurately reflected the data.
5. Define and name themes	The themes were refined based on discussions between the two researchers. The themes were then defined and labelled before the Principal Researcher conducted the thematic analysis using the refined framework.
6. Produce the report	Representative and illustrative quotes were chosen from the data and the findings were written up.

Interviewee characteristics

Thirteen LGBTIQ+ participants were interviewed. Two of the interviews were not transcribed and included in the analysis as one of the participants was unwilling to discuss their experiences with gambling and was suspected to have volunteered to receive the gift card incentive; and the other participant did not gamble. Therefore, 11 LGBTIQ+ participants (average age = 38.8) were retained for the analysis. Seven of the participants lived in Victoria, one in New South Wales, one in the Australian Capital Territory, one in South Australia, and one in Queensland. Their gender identities, sexual orientations, and severity of problem gambling are presented below in Figure 1.

Five key stakeholders were also interviewed. Two key stakeholders were from an Australian LGBTIQ+ community health organisation; and three were therapeutic counsellors from *Gambler's Help* services. Two of the therapeutic counsellors serviced a major metropolitan area and one serviced a rural/regional area.

All participants have been de-identified, and pseudonyms have been used throughout.

Figure 1 LGBTIQ+ interviewee demographics. Note that gambling categories are based on PGSI scores.

Findings

Three top-level themes arose from the interview discussions: 1) engagement with gambling, 2) pathway to gambling, and 3) access to support. Each of these will be discussed below.

Engagement with gambling

The participants' engagement with gambling was understood in these sets of ways: 1) small scale gambling, 2) hidden gambling, 3) habitual gambling, and 4) chasing wins and losses.

Small scale gambling

The majority of participants were classified in the non-problem gambling and low-risk gambling categories on the PGSI. Although many expressed a dislike for gambling and viewed it as a waste of money, they did nonetheless participate in gambling. Many of the participants tended to engage in less continuous gambling activities, such as instant scratch tickets or Lotto tickets, although they also gambled small amounts of money on EGMs. For example, when asked to describe her involvement with gambling, Christine replied,

> *Look, normally, if I'm buying the lotto, TattsLotto tickets or scratchies, it'll be because it's Mother's Day, or Christmas, or it's an occasion like that, or there's just a big draw on, or I'll see like, oh, $50 million, oh, I'd better get a ticket. So that's not really a social thing for me. But if I'm playing the pokies, or if I'm going to go*

> *to the casino or something like that, it'll be social and be because I'm already there doing something else; like, I've gone somewhere for dinner and they've got the pokie machines so I'll put some cash in.*

Indeed, the idea that gambling was a social activity, or a convenient gift was expressed by several of the participants. They spoke about their gambling as being quite ordinary.

> *I've been to the casino maybe twice. Sometimes I'll buy a scratchie or a lottery ticket. I don't really gamble very often, it's more of a casual thing, or if I'm out with my partner, or with friends, it'll be like, okay, let me just try my luck with $20 or something. I wouldn't say that I have a gambling problem.* (Sophie)

> *For me gambling is just a - it's just a social activity primarily for me. It's really just a social activity. I quite like going to the casino and gambling when I have people I can go with. I gamble occasionally on political events because I think it's funny. That's really it… For me it's just a fun thing.* (Hayley)

> *Honestly, most of it is buying raffle tickets for charities. That's pretty much the most I do in terms of gambling. Occasionally a Lotto ticket, but even then, it's usually just a cheap present for someone or something like that. I don't go down to the Lotto shop and buy myself a ticket. Maybe once or twice a year, if that. More the raffle things, but that's supporting a cause…I like going to the races from time to time, whether it be the May races…or Melbourne Cup, Oaks Day. But they're fun days and again, I'm more likely to go into a fund or something where the winnings are donated to a charity…I know from my experiences that gamblers don't win, ultimately.* (Mark)

Yet, their involvement with gambling seemed to conflict with their views about gambling. That is, while Mark enjoyed betting on the horse races or buying raffle/Lotto tickets, he also recognised that no one wins in gambling. While Christine spoke about her casual or social gambling, she also recalled the impact of her father's bankruptcy during her childhood:

> *Putting money in the pokie machines to me is - and losing it, is like throwing it away, you know. I get a bit upset and it makes me feel physically sick. So even from a young age, I just didn't like it.*

Other participants who spoke about their social involvement with gambling also viewed it as risky and not worthwhile.

> *I've seen so many peoples' lives get out of control because of gambling. I think I'm able to make that decision that it's not worth the risk, because you could lose everything, and the chances of winning are very, very slim.* (Sophie)

> *I'm also aware, when I'd be sitting with my friends, they would be drinking and playing pokies, I'd be like, "I don't want to fall down this hole."* (Lana)

> *If I happen to be in a pub with friends for a dinner or something, I might walk through the pokies area and put $5 or $10 into a machine. Then go well look, I might as well have stood at the door and just thrown it out on the street.* (Ben)

Therefore, while the interviewed participants tended to express negative views about gambling, they did engage in small scale gambling such as instant scratch tickets and/or play EGMs with the view that these were social activities or gifts for family/friends.

Hidden gambling

Some of the key stakeholders described gambling in LGBTIQ+ communities as being hidden and linked this to their previous or current need to hide their sexual and/or gender identity to avoid stigma and discrimination.

> *One of the things that always get reinforced is the fact that they are very good at hiding and so, and that sort of is in conjunction with gambling which is also something that people hide. So it's become like a double risk factor because they are so expert in hiding their sexuality. So it's not so hard for them to hide their gambling as well.* (Melissa, key stakeholder)

Two key stakeholders further emphasised that while experiencing gambling-related stigma and discrimination is true of people from cishet communities, LGBTIQ+ people also experience stigma and discrimination due to their sexuality and/or gender identity and therefore, are more likely to keep their gambling hidden.

> *Secrecy is a very big component of people who experience gambling problems. So that they are good at hiding it because it's a level of shame and stigma attached to it…So it's sort of you could also say that it's a double whammy really, that they are already used to a life with discrimination and stigmatization on top, so why would they want to be, why would they want to feel stigmatized further. As well as the fact that they are very good at hiding.* (Melissa, key stakeholder)

> *That's what we found with problem gamblers, that they have a perception that they will be stigmatised and seen as weak and foolish because everybody else can gamble supposedly and not incur harm. But they are weak and foolish because they've spent all their money on the pokies or whatever. So you get that stigma. Then you've got another leg of stigma coming with their gender identity…I would imagine it would be like a double barrier for people.* (Janet, key stakeholder)

Habitual gambling

Some of the interviewed LGBTIQ+ participants described habitual gambling behaviour. For example, four participants revealed that they gambled weekly:

> *I gamble every week without fail for the last 10 years.* (Seth)

> *It's a Lotto ticket every week.* (Ben)

> *I do it at least once or twice a week. I usually - I do this every week, I get Lotto tickets. That is one thing I get every week, but usually then maybe once or twice a month I go to Crown Casino and I just go in the pokies there.* (John)

> *Probably four days a week on average. Yeah, probably four days a week…There's a reasonable amount of time commitment to this.* (Justin)

Indeed, when one of the participants, John, was asked whether he had ever gambled when he did not want to, his response reflected the extent of his habitual pattern of gambling:

> *There have been a few times when I've done that. I just did it just because I've become so used to it now that even though I didn't want to, I sort of felt I had to…I think it's become a major part of my life.* (John)

For another participant, Mark, habituation was described in the form of 'tradition'. Although he expressed anti-gambling industry views, traditional events, such as the Melbourne Cup, seemed to be an exception to this rule. This suggests that certain events can trigger a patterned or habitual need to gamble.

> *I'm not keen to support the industry but a tradition of gambling, betting on the Cup and that sort of thing, those are traditional things and I think if they're done in a controlled way and moderately, then I don't see a problem with that sort of thing.* (Mark)

'Chasing' wins and losses

A few participants spoke about trying to chase wins as the pay-off would make their life easier and/or compensate for previous losses.

> *I have included in my budget a couple hundred dollars every month to continue Lotto tickets, because the desire to win or the desire to make my life easier, is incredibly strong.* (Seth)

> *Not having any savings as such is connected to my gambling because while we talk about that windfall making life easier, so not having a lot in super down the track contributes to me wanting to try and keep, make up for that shortfall, which may come through.* (Daniel)

> *From a day-to-day basis, I might lose a hundred or two. But I've sort of been picking that up on another day…I've probably had times when, with horse racing, that I was using it as - I would chase a result. Chase losses.* (Justin)

One of the key stakeholders, Michelle, also raised the notion of chasing wins and losses. She highlighted that this behaviour is what sets gambling apart from other addictions, such as alcohol and drug addiction.

> *Some people talk about chasing losses but they can't bear the thought of well, you know, if they stopped they'd have to face the wreckage of a long time of gambling...Gambling's the one addiction where continuing the behaviour is perceived as the solution to the problem. I think it's the only addiction where it's perceived as the solution.* (Michelle, key stakeholder)

While it has been documented that people from cishet communities also engage in this type of gambling behaviour, it may be particularly salient for people in LGBTIQ+ communities given that they have less access to funds due to unequal employment opportunities, a lower income, and/or a lack of savings due to difficulties in getting secure employment (Badgett et al., 2019; Budge et al., 2010; Fric, 2019; Herek, 2009). Indeed, this was reflected in Seth's comment above as he stated that winning the Lotto would "make my life easier."

Pathways to gambling

Although many of the interviewed participants were classified in the non-problem and low-risk gambling categories, they nonetheless reported some involvement with gambling and shared their experiences with access to gambling, addiction, mental health issues, and other life stressors which revealed different pathways to gambling. Five pathways to gambling were revealed: 1) accessibility of gambling, 2) emotional affect, 3) psychological distress, 4) coping mechanisms, and 5) control.

Accessibility of gambling

A few participants spoke of the increased accessibility of gambling. For example, Nadine expressed her concern that gambling may seem accessible at an early age as children are exposed to gambling through sport: "Something that I really dislike about gambling is the sport, how it happens in sport and how it's exposed to children. That's really off-putting." Mark discussed the increased availability of EGMs and the impact it has on people:

> *I was working at a pub for a while and I got stuck in the gaming lounge and just watching people losing money every single day, people who - they'd go to the petrol station, put $10 worth of petrol in their car because they'd spent all their money gambling. They couldn't feed their kids because they'd been sitting in the pokies on a machine from dropping them off at school to picking them up at night, that sort of thing.* (Mark)

Yet, two interviewees spoke about the heteronormativity of gambling (meaning, the advertisements for gambling activities focus on heterosexual and cisgender identities, values, beliefs and practices) and the way that can prevent gambling in LGBTIQ+ communities. First, one of the key stakeholders, Matthew, spoke about heteronormative gambling advertisements which isolate most people in LGBTIQ+ communities.

> *The heteronormativity of advertising for online gambling, and also regular, face-to-face gambling, is incredibly archetypal…there were a lot of them for a period who were using incredibly busty women in short outfits. It's just not stuff that is appealing to our community, really. So I think that there is a bit of self-exclusion in that.* (Matthew, key stakeholder)

Indeed, Matthew believed that heteronormative advertisements have caused some people in LGBTIQ+ communities to purposely avoid gambling in response to their discriminatory nature.

> *To be honest, I think a lot of our community have a bit of rebellion from the heteronormative sort of tropes gambling shows up in those a lot. That concept of not wanting to be the bogan at the pokies that they saw growing up.* (Matthew, key stakeholder)

Second, one of the LGBTIQ+ participants, Hayley, spoke about the heteronormative and overly male atmosphere of some gambling venues which made her stop attending them as she stated, "The vibe of a lot of sports gambling places is just…it's become, I don't know, a lot more blokey in the last few years. That's a bit of a turn-off." Matthew similarly spoke about the cultural differences between LGBTIQ+ communities and cishet communities in terms of social activities and how these differences might impact the accessibility of gambling.

> *I guess it is a shunning of the concept of gambling as a social activity…If you do look at the broader aspects of gambling, places like the casino, for example…it's not a space that includes and not a space where you'd take five or 10 other queer people to go, where you can engage in that activity, but also be really authentic to your sexuality...I think there's also just a different type of going out, and going out happens on a different timeline for socially active gay men, particularly younger socially active gay men, where you, there's a lot of specific parties that are really specific to the part of community member you are, whether that's a queer woman or queer trans person going out to a party in the Inner West at one of the factory venues, or you're a young, musclebound gay man who's going to one of the parties at the venues in Sydney that celebrate that, like the FagTag or something. When you're at those social spaces, gambling is certainly not a part of the night at all, so you can't have any consequential gambling.* (Matthew, key stakeholder)

While LGBTIQ+ people who go out socially in a group may not attend venues that provide an opportunity to gamble, a couple of the key stakeholders discussed the popularity of EGM venues, particularly for women. That is, for LGBTIQ+ people who are alone rather than in a group, EGM venues are popular as they are safe and provide company.

> *So the EGMs are like, they're a safer place. It's more socially acceptable to people. It is an excellent way for people, if they want to escape problems, to zone out. [One of my gay clients] spoke about that a little bit to me and a little bit about, a lot of my clients talk about boredom and loneliness.* (Janet, key stakeholder)

> *Apart from kind of visiting bars and clubs, pubs and clubs kind of thing, there's not a lot of options in country areas where people can safely mix and mingle. One of the things for women in rural areas is that idea that they can go to a pokies venue, it's open quite late, and feel quite safe there. That there's lights, there's*

> *people, there's staff around. It can be 2:00 or 3:00 in the morning but at least it's a safe place.* (Janet, key stakeholder)

> *They don't tend to [feel unsafe] at venues because they know that there's cameras there and they feel quite safe there. That's been the feedback.* (Michelle, key stakeholder)

Therefore, the participants discussed the accessibility and availability of gambling in terms of it being normalised in the Australian culture with children being exposed to it at an early age. However, the heteronormativity of the advertisements and some venues likely does not appeal to many LGBTIQ+ people and in fact, may result in some LGBTIQ+ people avoiding gambling. Moreover, access to some forms of gambling appear to be limited as LGBTIQ+ specific social venues do not typically have EGMs or other forms of gambling which eliminates consequential or unplanned gambling. However, for those who are not in a social group, EGM venues may increase access to gambling as they are perceived to be safe spaces.

Emotional affect

A few of the LGBTIQ+ identified participants spoke about their need for excitement and engaging in high-risk activities which influenced their desire or willingness to gamble. For example, John stated, "What I most enjoy about it, I think the possibility of winning," and Daniel similarly stated, "I think it's the endorphin rush of thinking that I might win something." Ben spoke about playing EGMs when he felt bored or needed some excitement. He liked playing high-risk games and often this was paired with other high-risk behaviour such as drinking alcohol and drug use. He recalled,

> *[My gambling] was a symptom of I'm wired, I'm bored, I need some excitement…If I was bored and off my face, more so in Sydney… I could go into a pub and put $500 into a pokie machine. Playing high-risk. All lines. Going for the maximum prize. Occasionally, it would pay out but not a lot.* (Ben)

One of the key stakeholders, Janet, similarly raised the issue of boredom as she stated, "a lot of my clients talk about boredom and loneliness." However, a couple of participants cited the risk-taking aspect of gambling as a deterrent as they had witnessed the impact that it can have on people's lives. For example, Lana spoke about their first experience with EGMs and the shock of watching their friend become singularly focused on the game and lose a lot of money in a short amount of time.

> *He just sat down and gone into his fugue state, and I sort of seen my friend disappear into the machine for a little while. Maybe that would have really changed the way I felt about gambling. I think I was already sort of wary, it seemed like a sort of dangerous edgy thing. Or that's how I sort of felt about it going in. Then to see, oh okay, we're 18 and he already had a big problem. Yeah, it was pretty shocking.*

Sophie also spoke about her cautious attitude towards gambling due to the risk of losing:

> *I've seen so many peoples' lives get out of control because of gambling. I think I'm able to make that decision that it's not worth the risk, because you could lose everything, and the chances of winning are very, very slim.* (Sophie)

Two participants found gambling to be relaxing rather than exciting and reported experiencing relaxation and reduced stress. For example, Justin said, "It can be a way of unwinding," and John explained, "It's more of a stress relief thing, more of an escapism thing." As will be discussed below under 'coping mechanisms', both of these participants had also discussed their initial difficulties with coming out and using gambling as a distraction. That is, they started gambling to avoid the realisation that they were gay and to avoid the stress of coming out. While both participants stated that their current gambling was not connected to stressors relating to their sexuality, they nonetheless used gambling as a means to relax and viewed it as a "comfort zone" (Justin).

Psychological distress

People who identify as LGBTIQ+ have consistently been found to be more at risk for psychological distress (Drabble et al., 2018; Goodin, Elswick, & Fallin-Bennett, 2019) due to living in a stressful social environment (Meyer, 2003). Hence, some of the interviewed participants spoke about a history of mental health problems. For example,

> *I've got quite bad mental health issues and I'll do things like drugs and alcohol and shoplifting.* (Christine)

> *I had issues with depression and [my father] did as well.* (Justin)

> *I also have anxiety, depression, complex PTSD, binge eating disorder, and a whole bunch of other things, really.* (Sophie)

The participants tended to raise these issues before they spoke about their involvement with gambling. Indeed, the interviewer often had to specifically ask about their gambling before they spoke about the topic. It is therefore possible that gambling is not viewed as a primary issue for some LGBTIQ+ people as they are experiencing other issues that are more dominant in their lives.

> *If it is an issue, it's not one that they want support with because they really need to find a house, a roof over their head; or they really want to stop their substance, or change their substance use. So it might pop up as, "oh, and by the way, I gamble a bit," but it's not something that they identify as something that they want support with or necessarily want to change their behaviour around.* (Elizabeth, key stakeholder)

Coping mechanisms

LGBTIQ+ people are more at-risk for substance abuse (R. Brown et al., 2015; Hughes et al., 2015; Reisner et al., 2013; Roxburgh et al., 2016). Drugs and alcohol are often used as a coping mechanism to deal with experiences of discrimination, prejudice, and stigma. It is therefore not surprising that the majority of interviewed participants spoke about current or previous issues with drug and alcohol use.

> *I'll freely admit I've struggled with alcoholism for a very long time, about seven years now. (Hayley)*

> *Up until, say, three years ago, I've been a functioning high use drug addict for 20 years. Intravenous drugs.* (Ben)

> *It just got all wrapped up into alcohol addiction which I was probably genetically predisposed because my father is an alcoholic but recovered now.* (Justin)

Furthermore, many of the interviewed LGBTIQ+ participants and key stakeholders spoke about life stressors and using substances and gambling as mechanisms for coping with adversity. The stress associated with coming out and using gambling and alcohol as a way to manage the associated stress was specifically mentioned by a couple of participants.

> *Maybe it's the stress of actually coming out and maybe at that time I couldn't cope with it very well. I just decided to at the time just do that gambling thing instead of actually focussing on what I actually needed to focus on.* (John)

> *Going back into my 20s when I first was trying to deal with this, I would have preferred just to have really isolated. If that was an option. If I had two options, it was isolating and just drinking and gambling and trying to do that instead of being openly gay, I would have chosen the drinking and gambling.* (Justin)

Two key stakeholders also recalled some of their LGBTIQ+ identified clients discussing the extra stress that they experienced due to coming out and issues relating to their sexuality.

> *They spoke a little about the extra strain that [the issues relating to their sexuality] put on them and that it was, yeah, it was like an extra burden. Though [one of my gay clients[2]] was interesting because he said to me once I came out, then that burden shifted. It kind of lifted.* (Janet, key stakeholder)

> *…for them to lean on gambling as a way to cope as well as how much of their, how much of their state have contributed to the trauma. Because any forms of addiction is a coping mechanism to anesthetize their emotional pain. So it's both ends. It's a sexuality versus discrimination experience as well as perhaps whatever trauma that have originated from their childhood.* (Melissa, key stakeholder)

Other participants spoke about general life stress and/or mental health issues and using drugs, alcohol and/or gambling to cope. For example,

> *I think with the drinking, I went through a period where my depression got really bad, and so I did drink because of that.* (Sophie)

> *I do admit that I do binge drink. Sometimes, if I've got a social occasion on, often I use it when I feel awkward, or nervous.* (Nadine)

> *Yeah [used drugs] to better deal with the rejection and to seek validation as well.* (Daniel)

> *Depression, alcoholism were the mechanisms for dealing with stuff that I didn't necessarily want to accept.* (Justin)

One of the key stakeholders, Michelle, spoke about the potential connection between gambling and the specific type of grief and loss that is experienced by some LGBTIQ+ people as their relationships are not always acknowledged and validated by family/friends. Therefore, when their relationship ends or if their partner dies, they do not receive support or an invitation to the funeral. Michelle stated,

> *There's very specific kind of loss I think that LGBTI people experience…when a really significant relationship, long term relationship ended, you know, no one kind of called her to ask her about how she was with, you know, it was like it didn't happen in her family. And those kind of losses I think that that's kind of specific to LGBTI people where they get excluded from, you know, significant life events and funerals of loved ones and things like that…those kinds of experiences of loss that aren't kind of acknowledged or people aren't socially supported for, those losses are so significant to people and that association between loss and gambling and grief I think it is another really significant part of that problem.* (Michelle, key stakeholder)

Michelle also discussed the way that gambling can help LGBTIQ+ people cope with loss when they are feeling isolated or unsupported. That is, going to a gambling venue can provide them with company when they are feeling lonely and isolated, and allows them to dissociate so they do not have to confront their pain.

> *I noticed that there's a really big association with gambling with disenfranchised grief. People who say that they just have nowhere to process it, they have no friends to talk to about it…Just needing to be able to zone out because they can't process it…they can be anonymous in venues so they can go into a venue and be around people but not have to talk to people…You know, they're around people but they don't have to share anything. So it kind of, that level of loneliness they're feeling I guess, they can associate, they can [dissociate] as well.* (Michelle, key stakeholder)

2 Client's name removed for anonymity.

Interestingly, three participants spoke about their history with or connection to addiction as a protective factor against gambling. That is, they had an acute awareness of their susceptibility to addictive behaviours. Therefore, they either avoided gambling or they were very cautious when they did gamble.

> *I've had problems with addiction. It helps that it's one of those things that I've had problems with addiction so far as a lot of things go so I do stay aware of it. (Hayley)*

> *My mum had an addiction at one stage to the pokies. She's also had issues with alcohol, as well. So, I'm quite aware that within, well, actually her father was an alcoholic, as well. So, I'm quite aware that within our family we've got that tendency to have addiction issues. Yeah, so that's something that I wouldn't want to be put through myself, or through my family.* (Nadine)

> *I used to drink and then I was sort of like, "mm I'm not really, I don't really make good decisions about this." So yeah, I don't drink anymore…I know I'm very much the kind of person who gets obsessed with things, so I'm like, "mm I'm just going to be really careful here." (Lana)*

Thus, the majority of interviewees spoke about experiences with current or previous addiction. For many of them, using drugs and/or alcohol helped them to cope with the adversity in their life and often increased their gambling behaviour. As Justin stated, "as soon as I started drinking again, it just went all out the window and I just went back to poker machines and drinking." Yet, for a few participants, their experiences with addiction protected them as they were more self-aware and knew there was a high risk that they could become addicted to gambling.

Control

LGBTIQ+ people are more likely to experience unequal employment opportunities, unequal access to healthcare, physical and sexual violence, harassment, prejudice, and stigma which all translate into reduced freedom and control over choices in their lives (Waaldijk, 2013). Some people who gamble develop an illusion of control as they believe that they can control the random outcomes of gambling (Orgaz, Estévez, & Matute, 2013). The issue of control emerged in the interview discussions, even among those with low-risk and moderate-risk gambling. That is, the participants perceived that they had control over their gambling and/or the outcomes from their gambling. For example, two participants felt they had control over their gambling as they explained that it was included in their weekly budget.

> *I was working most of the time for the last year, so I could afford it, and when I knew I wasn't going to be working, I wanted to keep gambling at that level, and so I've had to adjust my budget to ensure that I can afford to gamble…I've never felt the need to reach out to a support group for gambling, because I didn't feel I was out of control.* (Seth)

> *I believe that I can manage it, it's a matter of wanting to. I mean, let me think here. No, yeah, I mean, I can, I think I can manage it by just living within my means and not putting any extra stresses on things, on myself.* (Daniel)

One participant, Justin, spoke of having control over not only his gambling behaviour but also the outcomes. That is, he was so confident in his gambling and ability to make money that he specifically stated that he did not view it as gambling but rather as a business.

> *I've actually changed the way that I bet and I tend to use it more as a - I've been making money because I've been leveraging all these bonus bits and things that they give out…I've got to watch my obsessiveness but it's actually turned around in probably the last 18 months, that I actually make some money out of it…The last 18 months, I've just changed really how I've bet and done it smarter and made it in a way that it's more of almost a business or a trading proposition rather than a gambling proposition.*

This feedback suggests that LGBTIQ+ people may be more likely to gamble, whether problematically or not, due to a perception of control as they are more likely to lack control in other areas of their lives.

Access to support

Although none of the interviewed participants had accessed gambling support services, they were asked about their experiences with accessing mental health services and social supports. The feedback from the key stakeholders provided an interesting insight from the perspective of social support services. The discussions revealed two themes: 1) tendency to focus on sexual and/or gender identity, and 2) the need for more education and awareness of LGBTIQ+ issues.

Tendency to focus on sexual and/or gender identity

A few participants and one key stakeholder spoke about the frustrating tendency for some mental health professionals and social support workers to focus on their sexuality and/or gender identity when they did not feel like it needed to be discussed or that it was relevant to their presenting issue. The tendency to ask inappropriate questions was also discussed.

> *There's a bit of a phenomena that if you deal with mental health troubles and you are transgender and the mental health troubles you have are to do with being transgender, mental health professionals will tend to focus solely on your transition…The bigger thing is being trans can tend to, in the eyes of a lot of mental health professionals and social workers/counsellors, all that kind of stuff obscures any other issues.* (Hayley)

> *Sometimes people just ask really inappropriate questions and you think, you wouldn't ask someone that sort of question who is in a heterosexual relationship; and it's just like, why are you asking this of me? It's quite awkward and sometimes I'll just say to them, look, it's actually quite personal and, I don't know, I'm happy to give you some information privately but it's not really the place to discuss it. (Christine)*

> *If you go and see a counsellor about issue X, then the counsellor tries to tie it back to the fact that their sexuality or gender diverse...They have to almost drive the conversation back to the issue, or take it away from the sexuality and gender identity more to education about using correct pronouns and the fact that their Medicare card has a different name on it than the one they're currently using and what that actually means. It's a really exhausting thing for anyone using support services to go through. (Matthew, key stakeholder)*

One participant, Hayley, felt that her gender identity was something that she had dealt with long ago and therefore, did not want to discuss it as it was not something that was affecting her anymore.

> *It's a thing that there's really no choice about [my gender identity] being disclosed especially in dealing with, trying to find any kind of service that will help you in any way without having them concentrate on something that you've long since dealt with.* (Hayley)

Some LGBTIQ+ participants therefore experienced discomfort with having to discuss issues that were no longer a problem for them or were not relevant to the specific appointment. In other cases, some mental health professionals and social support workers pathologised the participant's sexuality or gender identity. Whether this was intentional or due to a lack of awareness, these experiences can act as a barrier to accessing support and underline the importance of providing cultural sensitivity education and training to mental health professionals and social support services.

Education and awareness

The previous theme relates to the second theme about education and awareness as the inappropriate focus on an individual's sexuality and/or gender identity highlights the need for more education and sensitivity training. Currently, many LGBTIQ+ people tend to choose new mental health professionals based on recommendations from other people in LGBTIQ+ communities. For example, Lana commented, "I'll go onto a queer group on Facebook and go, I'm looking for a psychologist who does this, this and this and who's good with pronouns and so on." However, reliance on recommendations is not a long-term solution as some people do not have contacts in LGBTIQ+ communities, others live in rural/remote locations where their options are limited, and it is critical that people in LGBTIQ+ communities are able to receive appropriate equitable care from a local mental health professional or service of their choice without worrying about stigmatising attitudes, discriminatory treatment or settling for a service that is not culturally competent.

Several participants reported that mental health professionals need to be better educated on LGBTIQ+ issues and appropriate language to use. Some spoke of instances where the mental health professional asked inappropriate questions due to their lack of understanding which meant they did not return.

> *The mainstream doctors, I don't think they actually understand our issue, like LGBT issues…Especially when it comes to like sexual health and all that stuff. They don't understand. They try to, but I feel that they don't really understand…like the terms I use, they don't understand that very well. And it's not their fault for that, but I think that they maybe should try and learn as doctors* (John)

> *I had a psychologist once who asked if I decided to be gay because my aunt's gay. That was the last time I saw her.* (Lana)

Participants typically spoke about having to educate the mental health professional or social support service worker themselves during consultations and appointments. While some participants did not mind doing so, others felt frustrated about using their appointment time to educate the professional. One of the key stakeholders also spoke about this issue.

> *The education thing is a big one. Nothing more frustrating than seeing someone and having to educate them rather than actually dealing with real problems. That's always a thing… it's like an ongoing cross you've got to bear.* (Hayley)

> *I'm one of these people that are quite happy to do a little bit of educating, as long as they're well-meaning and genuinely want to learn and not just screwing their nose up at me, I'm happy to take the time to explain; but sometimes I just think, oh I'm not going back there.* (Christine)

> *We know that people in our community, they're concerned about the fact that if they do go and talk to a counsellor, then they end up having to do education about sexuality and gender. I think this is particularly true for people who have a trans experience as well.* (Matthew, key stakeholder)

Given the mixed experiences with mainstream services, the participants were asked if they would be happy to access mainstream services if they were better educated and known to be sensitive, or whether they would prefer to access services tailored toward LGBTIQ+ communities. Several participants stated that they would be happy to attend a mainstream service rather than requiring a tailored service for LGBTIQ+ communities.

> *One of the things I look for if I'm looking for a service is the rainbow tick. So, if there's a choice between a couple of different services, one of them has the rainbow tick, the other one doesn't, I'll go the rainbow tick every time… generally I find that they're a bit more educated.* (Christine)

> *Mainstream and knowledgeable is totally adequate. In fact, some people prefer that...That's generally what we go for, for GPs and counsellors and stuff like that.* (Hayley)

One participant stated that it would be preferable to have sensitive mainstream services as tailored and LGBTIQ+ specific services tend to be difficult to attend due to high demand.

> *I tried to access [name removed] but they were just, they're so overworked there. They couldn't even organise me an intake assessment. So after about a month of trying I said, look, don't worry about it, I'll just access a mainstream service... but then, of course, you don't get the quality that you would with the other one.* (Christine)

Nonetheless, some participants responded that they would still prefer a tailored service as they make them feel more confident and understood.

> *Honestly I'd prefer the one that's tailored to the LGBT community, as long as it's not too far from where I live. But if there was no other option, I would choose a mainstream one.* (John)

> *I just go to people who have the specific experience or knowledge because it's easier - someone who can relate…it's a bit hard to talk about, I don't know, issues around male and male sex with someone who's straight.* (Daniel)

This feedback highlights the varied needs and preferences of people in LGBTIQ+ communities and the issue that a 'one size fits all' approach is not only an unrealistic goal but also inappropriate in health interventions (Kreuter, Strecher, & Glassman, 1999; Steiker, 2008). This is particularly true for LGBTIQ+ communities given the diversity of the subgroups and their varying issues and experiences which influence their specific needs. For example, Sophie commented, "I'm pretty happy with a mainstream service. I think because being bi, it doesn't really affect me that much." Therefore, while some gamblers who identify as LGBTIQ+ may prefer a tailored gambling support service, others may feel content with an educated and sensitive mainstream service. Indeed, Justin commented,

> *I don't know if the gambling side of it needs to be necessarily tied to it, to your sexuality thing…I think it's just going to be different for everyone. But I definitely think that you've got to focus on what the actual bigger issue is. Because as for me, obviously gambling was destructive but I had to tackle the other issues first. Whether that was alcoholism or whether it was sexuality.* (Justin)

The key stakeholder discussions suggest that some mainstream gambling support services are receiving regular LGBTIQ+ education and training. The three key stakeholders from *Gambler's Help* spoke about attending training sessions run by *Thorne Harbour Health* and *QLife*.

> *I think it was a kind of standard a few years ago. I did some training then. But our organisation has a policy… It's like a mandatory reading that might take you 20 minutes to go through and it's on LGBTQI issues and treating people with respect and things like that…we have to do that kind of training annually. But I mean yeah, it was just, it's not a lot of training at the moment.* (Janet, key stakeholder)

> *We've linked with Thorne Harbour Health and we do community consults…We have ongoing training here. We're about to have some training with QLife in the next month or so. So I see it as really important that I continue updating myself and I will read a lot as well about the kind of issues for LGBTI people.* (Michelle, key stakeholder)

> *We have training workshops with Thorne Harbour Health as well as QLife…We are very committed to work with this particular community. (Melissa*, key stakeholder*)*

Furthermore, some of the *Gambler's Help* centres display rainbow flags and other such symbols to let people in LGBTIQ+ communities know that they are a sensitive service. Indeed, one key stakeholder believed their centre was receiving positive word-of-mouth as the number of LGBTIQ+ clients had increased.

> *We have a lot of, kind of iconic posters and flags in our reception area. So I think, you know, I can imagine in the community getting word of mouth is a strong way for clients to approach the service so we have seen an increase lately.* (Michelle, key stakeholder)

> *We made it very obvious that we are LGBTIQ friendly services that are [unclear] and we, a few of us have, you know those things that carry your name tag, we have, we all wear rainbow ones. (Melissa*, key stakeholder*)*

However, some of the feedback suggests that despite the education and training, there is still some uncertainty among counsellors about how to approach the conversation of gender and sexuality with clients. That is, one key stakeholder, Michelle, stated that she will ask about someone's sexuality if they "haven't mentioned for a few sessions." Janet, on the other hand, does not ask about a client's sexuality as she does not feel it is relevant:

> *I don't see it as something I need to know unless they want to tell me. Because some of that stuff I, as a counsellor, my stance is what they want me to know, they'll let me know. I go with that.* (Janet, key stakeholder)

It is unknown whether gambling support counsellors from other services also receive LGBTIQ+ education and training as they were not interviewed. However, the key stakeholder discussions suggest that while their education and training has improved their understanding of LGBTIQ+ issues, ongoing training is required. Furthermore, one key stakeholder, Melissa, believed that in order to increase access to gambling support services among LGBTIQ+ communities, a multilevel approach may be needed. That is, in addition to educating mental health professionals and social services, community attitudes need to be changed to reduce the normalisation of gambling.

> *It requires many level of intervention not just at the service level. It sort of require attitude change in the community, in the wider community, awareness of gaps, being something that you can get help from. You know, Australia has such a big culture of gambling…it requires systemic changes. Attitude change...It's why on the ground level for service that we would have to…position ourselves to let people know that we are LGBTIQ friendly. But we, you know, it's not just that we have those symbols out on the counter, but we actually would employ LGBTIQ staff. And that we all have trained in the area.* (Melissa, key stakeholder)

Discussion and conclusion

A limited number of studies have examined gambling in LGBTIQ+ communities and to date, no studies have qualitatively explored the lived experiences of LGBTIQ+ people who gamble. This pilot exploratory qualitative study aimed to address this gap and has added novel findings to the gambling literature by exploring: the experiences of LGBTIQ+ people who gamble; the ways in which experiences of discrimination, stigma, prejudice and/or harassment might shape the gambling practices and motivations of LGBTIQ+ people; and the help-seeking and access to gambling support services.

Summary of the key findings

The following sections will discuss the key findings from the interview discussions, keeping in mind these three key research questions:

1. How might LGBTIQ+ people characterise or understand their engagement with gambling practices?
2. How might experiences of discrimination, prejudice, stigma and/or harassment intersect with gambling experiences of LGBTIQ+ people?
3. Why might a LGBTIQ+ person choose, or not choose, to access services for potential concerns with their gambling practices, and what factors influence these decisions?

Gambling as hidden, normative, and ordinary

It was revealed that although many of the participants were classified in the non-problem or low-risk gambling categories, they all participated in gambling to some degree despite expressing negative views about gambling. They tended to describe their gambling behaviour, however, as being normal or ordinary which involved buying Lotto tickets, instant scratch tickets, and/or playing EGMs, with the view that these were social activities or gifts for family/friends. This suggests that perhaps these sorts of gambling activities are not considered gambling by some people which is consistent with the literature (K. L. Brown & Russell, 2020; Donaldson et al., 2016). This also suggests that the intentions of people (that is, to buy a Lotto ticket as a gift or to place bets at the Melbourne Cup as a social activity) may influence their perception of whether they are gambling or not which is also consistent with the literature (Pitt, Thomas, Bestman, Daube, & Derevensky, 2017).

The interviews also revealed a theme of hidden gambling. That is, the key stakeholders had observed the tendency for LGBTIQ+ gamblers to conceal their gambling behaviour. This may be because this population is already stigmatised and may be at greater risk for mental health distress and drug and alcohol abuse (Chakraborty et al., 2011; Condit et al., 2011b; Meyer, 2003). Therefore, LGBTIQ+ people who gamble may be reluctant to discuss their gambling as they may be worried about receiving yet another stigmatising label. This is consistent with the literature on felt stigma which purports that LGBTIQ+ people are aware of society's stigmatising opinions of sexual and gender minority groups and are therefore motivated to protect themselves by avoiding being labelled as sexually or gender diverse (Herek et al., 2015) or may attempt to engage in homonormative practices to lessen the experience of stigma (Duggan, 2002). Therefore, LGBTIQ+ people who gamble way be aware of society's stigmatising attitudes towards not only their sexual and/or gender identity but also their gambling behaviour which may motivate them to minimise their self-described involvement with gambling to protect themselves.

Potential pathways to gambling in LGBTIQ+ communities

The interview discussions revealed shared pathways to gambling through themes of addiction, mental health issues, and other life stressors that can also be found within cishet groups (R. Brown et al., 2015; Hughes et al., 2010; Hughes et al., 2015; Reisner et al., 2013; Roxburgh et al., 2016). These gambling pathways are an important and novel contribution to the gambling literature and bring some context to the ways in which LGBTIQ+ people may characterise their own gambling. Even though not all participants were classified in the problem gambling category (indeed, most were classified in the non-problem and low-risk gambling categories), they nonetheless reported some involvement with gambling and themes of addiction and mental health issues. Blaszczynski and Nower (2002) have proposed three pathways to gambling for 1) behaviourally conditioned problem gamblers, 2) emotionally vulnerable problem gamblers, and 3) antisocial and impulsive problem gamblers. The feedback from the interviewed participants is consistent with the second pathway for emotionally vulnerable problem gamblers. In this pathway, the authors state that some people are more vulnerable due to difficult childhood experiences which can increase their risk for engaging in gambling as it provides an emotional escape (Blaszczynski & Nower, 2002). The pathway describes the different processes and stages which cumulatively contribute to the development of an emotionally vulnerable problem gambler. The finding that each process or stage in their second pathway aligned with the feedback from the interviewed participants suggests that LGBTIQ+ people may be at high risk for the development of gambling problems.

The pathways to gambling which were identified in the current study's interviews were: 1) accessibility of gambling, 2) emotional affect, 3) psychological distress, 4) coping mechanisms, and 5) control. The first pathway in this report (accessibility of gambling) aligns with Blaszczynski and Nower's (2002) pathway for emotionally vulnerable problem gamblers which describes ecological factors. Ecological factors refer to the availability of gambling and the person's access to gambling. Blaszczynski and Nower (2002) refer to this as the "starting block" to gambling (p. 491) as they are the determinants relating to public policy and regulatory legislation which create a social environment in which gambling is normalised and promoted. In the current study, participants discussed the normalised nature of gambling as they cited examples of early childhood exposure and easy access to, and increasing availability of, EGMs. This is similar with other research which has found gambling to be perceived as a social norm (Delfabbro & King, 2012; Pitt, Thomas, & Bestman, 2016). However, the heteronormativity of gambling advertisements and venues were discussed as being a deterrent to gambling since most advertising focuses on heterosexual, traditionally masculine, and potentially violent spaces and engagements which are known to be dangerous and uncomfortable for LGBTIQ+ people (Deans et al., 2016; Lamont & Hing, 2019).

The second, third, and fourth pathways in the current report (emotional affect, psychological distress, and coping mechanisms) align with the group of factors in Blaszczynski and Nower's (2002) pathway which contribute to emotional vulnerability. This is the group of factors which distinguish the emotionally vulnerable problem gamblers from behaviourally conditioned problem gamblers. Blaszczynski and Nower (2002) proposed that the emotionally vulnerable subgroup of gamblers tend to have premorbid anxiety and/or depression, poor coping mechanisms and problem-solving skills, adverse experiences with family, and stressful life events. They theorised that people in this subgroup gamble to manage affective states and/or meet psychological needs (Blaszczynski & Nower, 2002). In the current study, the participants discussed issues relating to this pathway, however, their experiences were mixed. For example, while some participants enjoyed the high-risk nature of gambling, others found this to be a deterrent and made them more cautious. The feedback relating to co-morbid mental health issues, and the use of drugs, alcohol, and/or gambling as coping mechanisms was more consistent which was perhaps to be expected as LGBTIQ+ people typically have a higher risk for psychological distress (Drabble et al., 2018; Goodin et al., 2019) and using unhealthy coping mechanisms to deal with stress and adversity (Mereish, O'Cleirigh, & Bradford, 2014; Meyer, 2003; Reisner et al., 2015; Slater et al., 2017). However, while some participants used gambling as a coping mechanism, others reported that their history of mental health issues and/or tendency to use substances to cope with adversity had made them more aware of their increased risk for the development of gambling problems. These participants seemed more self-aware and therefore, were more cautious when they gambled as they did not want to develop a problem with gambling or experience the related harms such as a loss of savings.

The last gambling pathway which was identified in the current study, control, is consistent with the group of factors in Blaszczynski and Nower's (2002) pathway which describes classical and operant conditioning. Classical and operant conditioning factors are those which increase a person's participation in gambling, and lead to the development of habitual gambling patterns and erroneous cognitive beliefs relating to their probability of winning and their personal skill (Blaszczynski & Nower, 2002). Specifically, the current study's pathway relates to the erroneous cognitive beliefs which participants formed after frequent gambling. Some participants reported a belief that they could control their gambling and/or the outcomes of their gambling, a finding which is consistent with the literature (Bjerg, 2010). Thus, the feedback from the participants aligns with the 'irrational beliefs' and 'illusion of control' cognitive schemas which are described by Blaszczynski and Nower (2002).

The pathways to gambling which were revealed in the interview discussions were therefore consistent with Blaszczynski and Nower's (2002) second pathway to problem gambling, despite the participants predominantly being classified in the non-problem and low-risk gambling categories. Many of the participants engaged in ordinary levels of recreational gambling, such as, playing EGMs in a social situation and/or occasionally buying an instant scratch ticket or Lotto ticket for fun or as a gift. Yet, their feedback nonetheless aligned with the pathway to problem gambling which highlights the increased risk that LGBTIQ+ people may have for problem gambling.

LGBTIQ+ discrimination, isolation, and emotional coping

The impact of experiences of discrimination, prejudice, stigma, and harassment on gambling were discussed in different ways. The LGBTIQ+ participants and the key stakeholders discussed the stress associated with coming out and how it influenced their gambling. That is, some of the LGBTIQ+ interviewed participants described experiences of stress and fear before coming out and thus initially used gambling as an escape to cope with their stress. This is consistent with research which has found gambling is sometimes used to escape emotional pain (Hamilton-Wright et al., 2016; Schlagintweit et al., 2017). Indeed, research has found that coming out can result in violent and rejecting reactions from family, such as withdrawal of affection, love, concern, or support, in addition to physical and/or psychological harmful behaviour (Carastathis et al., 2016; Rohner, 2004). Therefore, this process can cause high levels of stress and anxiety and are often associated with increased drug and alcohol use (D'Amico & Julien, 2012). However, it is important to note that although some participants started gambling to escape the stress of coming out, they did not perceive that their ongoing gambling was linked to this event.

The impact of discrimination on gambling was revealed through discussions of experiences of emotional isolation. That is, as discussed in the interviews, LGBTIQ+ people sometimes experience grief in isolation as the legitimacy of their relationships may not be acknowledged by family, friends, and/or society (Fingerhut & Maisel, 2010; Skerrett, Kõlves, & De Leo, 2017); or the person may not have come out and so their relationship was a secret (Jaspal, 2015). Thus, as has been found in other studies, family/friends may not offer support if a relationship ends or a partner dies (Fingerhut & Maisel, 2010; Jaspal, 2015; Skerrett et al., 2017). This emotional isolation and disconnection from cishet communities may be more pronounced if the person is also not involved with their LGBTIQ+ community as they may struggle to find someone who can relate to their grief and invisibility, or may not feel as though they belong, as is often the case for non-monosexual people (i.e. bisexual and pansexual; Hayfield, Clarke, & Halliwell, 2014). Gambling may therefore be used to help LGBTIQ+ people form connections with other people in moments of emotional isolation and grief (Nuske, Holdsworth, & Breen, 2015). In fact, consistent with the literature, the interview discussions raised the idea that EGM venues are perceived to be safe spaces which provide an opportunity for human connection and to escape from the negative aspects of their life (Delfabbro, King, Browne, & Dowling, 2020; Dowling, Smith, & Thomas, 2005; Nuske et al., 2015; Rockloff et al., 2011). Further research is warranted to examine this relationship between isolated grief, experiences of discrimination from family and friends, and gambling behaviour.

The impact of minority stress and discrimination on gambling was represented in the discussions of control. That is, LGBTIQ+ people may experience additional stressors due to their minority status which can make them vulnerable to engaging in high-risk and potentially unhealthy behaviours (Meyer, 2003). Furthermore, due to prejudice and discrimination, many people in LGBTIQ+ communities experience unequal opportunities, reduced freedom and less control over choices in their lives (Waaldijk, 2013). Some of the LGBTIQ+ participants discussed having perceived control over their gambling and/or the outcomes of their gambling which is consistent with research which has found some people to develop an illusion of control over the random outcomes of gambling (Orgaz et al., 2013). This may increase the appeal of gambling for some people as they believe they can control the outcomes from their gambling, particularly if they tend to engage in high-skill games such as sports betting and table games (Bjerg, 2010). Therefore, some LGBTIQ+ people may be more likely to gamble and develop an illusion of control if they are experiencing a loss of control in other areas of their life due to prejudice and discrimination.

Lastly, the heteronormativity of gambling advertisements and venues was discussed by some LGBTIQ+ participants and key stakeholders. They felt that some LGBTIQ+ people may feel excluded from certain gambling activities or they may not relate to them. Furthermore, the gambling venues were described as "blokey" and not typically a venue that LGBTIQ+ people would visit during a social night out. This is consistent with research in which sports betting is described as a boisterous and masculine leisure activity (Lamont & Hing, 2019), and is advertised in Australia using heteronormative tropes which glorify cishet men and objectify cishet women (Deans et al., 2016). As discussed in the interviews, LGBTIQ+ people who prefer to attend social spaces that are LGBTIQ+ specific or known to be friendly to feel safe and connected to like-minded others (Condit et al., 2011a; Demant et

al., 2018a; Gruskin et al., 2007; Parks, 1999) may have less access to unplanned gambling due to an absence of EGMs. Therefore, there may be less problem gambling among LGBTIQ+ people due to cultural differences between the cishet and LGBTIQ+ communities that make gambling seem less relatable and accessible.

Challenges in accessing gambling-specific support services

Consistent with the literature on help-seeking among LGBTIQ+ people, the participants in this study were more likely to access mental health or social services that were known to be educated and sensitive (Romanelli & Hudson, 2017). This was important to some participants as they reported instances of educating the mental health professional about their sexual and/or gender identity, feeling as though their sexual and/or gender identity was being pathologised, and having to redirect the conversation to focus on their issue rather than their identity. Similar issues have been reported elsewhere as barriers to accessing support (Koh et al., 2014; McNair, 2014) and in some cases, may be due to the historical practice of viewing minority sexualities as something to be cured (G. Smith et al., 2004). Indeed, given that research has found that some mental health professionals and other healthcare professionals hold negative and stigmatising attitudes towards members of LGBTIQ+ communities (Khan et al., 2008; Kissinger et al., 2009), it is not surprising that many of the participants in the current study stated their desire for tailored or culturally sensitive services. However, many participants also said that they would be willing to attend a mainstream gambling support service if it was educated and sensitive.

Some of the key stakeholders discussed the LGBTIQ+ sensitivity training they had received through their work. While they reported feeling comfortable working with LGBTIQ+ clients and felt more aware of the issues faced by people in these communities as a result of the training, some of the key stakeholders also stated that they do not ask clients about their sexual and/or gender identity. Yet, research has found that some LGBTIQ+ people are hesitant to self-disclose unless they are directly asked (Baker & Beagan, 2014). Moreover, it is important for a mental health professional to be aware of a client's identity so that they can use appropriate language, avoid making heteronormative assumptions, and explore LGBTIQ+ specific issues which might be influencing their gambling behaviour. Heterosexist unconscious bias, meaning not using the correct language and making heteronormative assumptions, can negatively impact the relationship between the client and the mental health professional and thus create a barrier to care (AHRC, 2015; Koh et al., 2014; McNair, 2014; Romanelli & Hudson, 2017). Such demonstrations of heterosexism can cause the client to feel shame (Neisen, 1993) and may increase their gambling (Baxter et al., 2016; Hing et al., 2016). Therefore, these comments from the key stakeholders suggest that regular LGBTIQ+ sensitivity training and education are needed to increase the confidence of the counsellors to ask about a client's sexuality and/or gender identity, and to increase their awareness about the importance of asking the question.

Implications of the study

The findings from the interviews raised the issue of inclusivity in healthcare and support services that are available to LGBTIQ+ communities. Despite the growing visibility of LGBTIQ+ people and the increased awareness of their unique health needs (Rossi & Lopez, 2017), many healthcare professionals and services may not receive LGBTIQ+ specific cultural sensitivity training. Thus, many may be unable to effectively address issues that are unique to LGBTIQ+ identified clients, thus contributing to the barriers to accessing healthcare services (Kitts, 2010; Mullens et al., 2017). Insufficient cultural competency among healthcare professionals is often exhibited through the use of incorrect language and discomfort with navigating discussions relating to their client's sexual and gender identity (Mullens et al., 2017). Although guidelines and recommendations are available to assist healthcare professionals working with LGBTIQ+ clients (Rossi & Lopez, 2017; Scout, Miele, Bradford, & Perry, 2006; Talley, 2013), these may be insufficient on their own. Given that LGBTIQ+ people have been predominantly overlooked in gambling research (Richard et al., 2019), the outcomes from this study have important implications for gambling support services to ensure they are appropriate for people in the various LGBTIQ+ communities.

The interview discussions highlighted the difficulty of developing a gambling support service that will meet the needs and be suitable for all LGBTIQ+ people. Indeed, the conflicting feedback from participants regarding their preference for a culturally tailored gambling support service versus an educated and sensitive mainstream service demonstrated this difficulty. Moreover, given the diverse range of LGBTIQ+ subgroups, it is an unrealistic goal to develop one program that will be relevant and relatable for everyone. This raises the question of whether numerous culturally tailored gambling support services should be developed to meet the needs of each subgroup or whether resources should be used for delivering mandatory cultural sensitivity training to all healthcare professionals and services. There are conflicting opinions in the literature that support each of these options (Castro, Barrera Jr., & Holleran Steiker, 2010; Stevens, 2012). For example, advocates of the first approach argue that separate and targeted programs should be developed so that the lifestyle, language and experiences unique to each subgroup can be included in the program to increase its relatability (Castro et al., 2010). Meanwhile, supporters of the latter approach value the education of services and healthcare professionals to ensure they are culturally competent and inclusive as research has found the effectiveness of mental health interventions to increase fourfold when they are considerate of the cultural context and values of minority individuals (Griner & Smith, 2006). To meet a wider range of needs, it may be best to consider both approaches.

Discussions of gambling prevention and support programs should also consider the broader issue of the normalisation of gambling. Indeed, this was discussed in the interviews and demonstrated in the recreational levels of gambling in which many of the interviewed participants engaged. For example, many participants gambled during social gatherings and/or bought instant scratch tickets or Lotto tickets as birthday gifts. Therefore, developing appropriate gambling support services for all LGBTIQ+ communities may be insufficient on its own for effecting a cultural change in gambling.

In the field of alcohol use among LGBT women, McNair and colleagues (2015) have recommended that a multi-level response is needed to effectively produce change. Their recommendations can be applied to gambling prevention and support as alcohol and gambling are both normalised in the Australian culture which can prevent efforts of behaviour change. Based on the recommendations from McNair and colleagues (2015), a multi-level response includes raising awareness of gambling or the risk for problem gambling in LGBTIQ+ communities within the healthcare sector, and increasing understanding among healthcare professionals of the intersection between gambling, sexual orientation and gender identity and gambling-related issues (McNair et al., 2015). In fact, this was an issue which was consistently discussed in the current study's interviews as many participants felt that healthcare professionals are not educated about LGBTIQ+ specific issues. The participants reported having to educate healthcare professionals during their appointments, correcting heteronormative language and incorrect pronouns, perceiving discomfort from the healthcare professional, and feeling dissatisfied with the care they had received. While this feedback was about healthcare professionals and services in general, it can be used to guide the development of gambling prevention and support programs and/or initiatives as it is consistent with what has been reported by LGBTIQ+ people in other studies (Koh et al., 2014; McNair, 2014). Education interventions have the ability to counteract misinformation (Arboleda-Flórez & Stuart, 2012) and hence challenge stereotypes and stigmatising attitudes by increasing awareness (Bartholomew Eldredge et al., 2016; K. L. Brown & Russell, 2019). These changes may increase the willingness of LGBTIQ+ people to access gambling support services as they may be less concerned about being stigmatised for their LGBTIQ+ status and/or gambling and feel more confident that the service will provide appropriate and sensitive care.

Health promotion campaigns could also be implemented to change the attitudes of LGBTIQ+ people (and indeed, cishet people) towards gambling (McNair et al., 2015). Based on the interview discussions and gambling literature which have found gambling advertisements to be heteronormative (Deans et al., 2016), researchers should be mindful of developing health promotion campaigns that are tailored towards LGBTIQ+ communities so they are more relatable. Indeed, the issues which influence gambling among LGBTIQ+ people and/or the motivating factors to reduce or stop gambling are likely different for cishet and LGBTIQ+ communities. For example, some of the interviewed participants in the current study initially used gambling to escape from identity-related stress and fear about coming out to their family and friends, which is an issue which is not experienced by cishet people.

Therefore, campaigns tailored to LGBTIQ+ communities could include messaging that is representative of diverse genders and sexualities, such as having advertisements and campaigns that feature diverse queer people, couples, and families, and addressing issues which are relevant to LGBTIQ+ communities such as stress related to coming out.

These changes may help to reduce the risk for gambling in LGBTIQ+ communities and/or limit recreational gambling which may become problematic. These changes may also enable people in LGBTIQ+ communities to feel more confident about accessing support services as they will be able to receive appropriate care from a local healthcare professional or service of their choice without feeling compelled to hide their sexual and/or gender identity or settle for a service that is not culturally competent and will not meet their needs (Pennay et al., 2018).

Strengths and limitations

A notable strength of this study was the new information it added to the gambling literature as no other studies have qualitatively explored the lived experiences of LGBTIQ+ people who gamble. However, there were also some limitations that need to be addressed. First, due to time limits on recruitment, only two interviewed participants were classified as problem gamblers and one was classified as a moderate-risk gambler. This meant the experiences that were shared were not necessarily representative of LGBTIQ+ people who are problem gamblers.

Second, the majority of participants were from the state of Victoria which has a high level of LGBTIQ+ acceptance in metropolitan Melbourne and some regional areas, such as Geelong, Shepparton and Daylesford among others. This means that participants may have more access to LGBTIQ+ safe spaces that do not intersect with gambling spaces. Future research could consider regional and rural areas to see if there are higher rates of gambling among LGBTIQ+ people, and explore their specific lived experiences.

As with Study One, a third limitation was that no people with intersex variations were interviewed. While the researchers aimed to include a diverse range of sexual and gender identities to ensure the lived experiences of the smaller and harder to reach subgroups were represented, no people with intersex variations volunteered to complete an interview. Their experiences with gambling are therefore not included in this study. Future research should consider a purposive sampling method to ensure people with intersex variations are represented in the gambling literature.

A final limitation was that we did not interview LGBTIQ+ participants who had experience with accessing gambling support services. Although gambling support counsellors were interviewed, their perception of the sensitivity and cultural awareness of their services is likely biased. Given that LGBTIQ+ people have previously reported low satisfaction with mental health services and social support services, it is important that future research explores the experiences of LGBTIQ+ people who have accessed gambling support services.

Conclusions

This study was a pilot exploration into the lived experiences of LGBTIQ+ people with gambling and their experiences with support services. The interview discussions clarified potential pathways to gambling in LGBTIQ+ communities. These pathways shared similarities to Blaszczynski and Nower's (2002) pathway for emotionally vulnerable problem gamblers. Although the interview discussions suggested that many LGBTIQ+ people engage in recreational gambling, the parallels between the current study's gambling pathways and Blaszczynski and Nower's (2002) pathways for problem gamblers underlines the potential risk that their recreational and low-risk gambling behaviour could develop into problem gambling. Moreover, despite the regular LGBTIQ+ sensitivity training that some gambling support services receive, there are still potential issues with heteronormative unconscious bias as the interviewed counsellors seemed reluctant to ask clients about their sexuality and gender identity, and clients may not offer these details unless asked. Furthermore, the interview discussions highlighted that LGBTIQ+ people

may be less likely to access support for their gambling due to previous negative experiences with other mental health professionals.

The interview findings suggest that LGBTIQ+ specific gambling prevention messages and programs are required to reduce the risk of current levels of recreational gambling developing into problem gambling and to raise awareness of the risks that are associated with lower-risk gambling. The campaigns should be more relatable to LGBTIQ+ communities by including non-heteronormative images and addressing issues that are relevant to the LGBTIQ+ people.

Conclusion

This report has presented the findings from two separate innovative studies. Study One was the first to examine both risk and protective factors for problem gambling severity and gambling-related harms among people in LGBTIQ+ communities. The LGBTIQ+ sample reported significantly lower problem gambling severity and gambling-related harms than the cishet population. However, approximately 28 per cent of LGBTIQ+ participants were classified as problem gamblers and 68 per cent of this group experienced a range of gambling-related harms. Moreover, they experienced other issues, namely erroneous cognitions about gambling and more negative expectancies about gambling, which significantly increased their risk for problem gambling and/or experiencing gambling-related harms. Having more social support was found to significantly protect against problem gambling and related harms. Positive expectancies about gambling were found to be a more pronounced risk factor for problem gambling severity and related harms among the LGBTIQ+ group than the cishet comparison group.

Study Two was a pilot exploratory study and was the first to qualitatively explore the lived experiences of LGBTIQ+ people in relation to their gambling behaviour, the ways in which their experiences as a LGBTIQ+ person may have influenced their gambling, and their experiences with accessing gambling support. The discussions revealed potential pathways to gambling in LGBTIQ+ communities and the ways in which LGBTIQ+ people engage with gambling. Furthermore, the reluctance of some of the key stakeholders to ask clients about their sexual and gender identities highlighted the importance of continued education and sensitivity training among gambling support services.

While the novel findings from Study One and Study Two can be used as comparative benchmarks for future research, it is clear that more research is needed. Specifically, large-scale representative sampling should be conducted to rigorously compare gambling, problem gambling, and gambling-related harms in LGBTIQ+ and cishet populations; longitudinal research is required to definitively identify risk and protective factors for LGBTIQ+ communities; and qualitative research is required with LGBTIQ+ samples who have lived experience of gambling problems/harms and help-seeking. Culturally appropriate health promotion campaigns are required to provide education about the risks associated with gambling and highlight the harms of gambling.

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Appendices

Appendix A – Ethics approval letters

Human Research Ethics

Deakin Research Integrity
Burwood Campus
Postal: 221 Burwood Highway
Burwood Victoria 3125 Australia
Telephone 03 9251 7123
research-ethics@deakin.edu.au

Memorandum

To: Mrs Rachel Bush
School of Psychology

B

cc:

From: Deakin University Human Research Ethics Committee (DUHREC)

Date: 08 January, 2019

Subject: 2018-366
Examining Risk and Protective Factors for the Development of Gambling-Related Harms and Problems

Please quote this project number in all future communications

DUHREC considered the application for this project at its meeting held on 03/12/2018 and found it to comply with the National Statement on Ethical Conduct in Human Research (2007).

DUHREC has granted approval for Mrs Rachel Bush, School of Psychology, to undertake this project from 7/01/2019 to 7/01/2023.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time.
- Any events which might affect the continuing ethical acceptability of the project.
- The project is discontinued before the expected date of completion.
- Modifications are requested by other HRECs.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

DUHREC may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007).

Human Research Ethics Unit
research-ethics@deakin.edu.au
Telephone: 03 9251 7123

The Thorne Harbour Health Community Research Endorsement Panel has fully considered you application:
Examining Risk & Protective Factors for the Department of Gambling–Related Harms & Problems.
(My paraphrasing: an examination of the relationship between experiences of being LGBTIQ+ in Australia and potential gambling–related harms).

I would like to inform you that the Panel observes that the sample you plan on, of 100 participants, is relatively small and it may
be beneficial - if possible - to find a way, and therefore an opportunity, to expand the sample group if you can, as this may improve any outcome.
The Panel encourages you to carefully think about how you may attend to the heterogeneity of the LGBTI population. For example, with a sample of only 100 people
it may be difficult to identify any differences between men and women, or between trans and cis gendered people.
Not to examine these differences might be to mask important differences between them. This information may then in turn better inform your project's findings.

However, notwithstanding this observation and feedback, I am pleased to advise you that the research has been approved.

The Thorne Harbour Health's approval number is **THH/CREP/19/002.**
Would you please quote this number on any promotional materiel or publicity you may produce in order to inform others that it has been before our Panel.
Also, if you wish to send any such material to me directly I can assist in getting that conveyed to our partners and across our sites to publicise your research.

Appendix B – LGBTIQ+ targeted flyer and poster

Note that the advertisements used the phrase “do you gamble?” to let people know we were recruiting participants for a study about gambling. This phrase was used as it was a simple and concise phrase, however, it is possible that some people may not consider their behaviour (e.g. buying scratch tickets or lotto) as gambling and therefore did not participate in the survey.

DO YOU GAMBLE? DO YOU IDENTIFY AS LGBTIQ+?

We want to know about your experiences with gambling and in particular, in situations where you sometimes gamble more than you intend or like to.

If you identify as lesbian, gay, bisexual, transgender, intersex, queer, non-binary, gender fluid, or any other diverse sexual and/or gender identity, are a resident of Australia, and are aged 18 or over, you are invited to join this study.

Go online and complete the survey: http://bit.ly/gamblingsurvey1

By completing this survey, you will go into a draw to win one of six $50 retail vouchers.

For more information, email Rachel Bush: rachel.bush@deakin.edu.au

This project has been approved by the Deakin University Human Research Ethics Committee (ref: 2018-366) and the Thorne Harbour Health Community Research Endorsement Panel (ref: THH/CREP/19/002).

Deakin University CRICOS Provider Code: 00113B

DO YOU GAMBLE? DO YOU IDENTIFY AS LGBTIQ+?

We want to know about your experiences with gambling and in particular, in situations where you sometimes gamble more than you intend or like to.

If you identify as lesbian, gay, bisexual, transgender, intersex, queer, non-binary, gender fluid, or any other diverse sexual and/or gender identity, are a resident of Australia, and are aged 18 or over, you are invited to join this study.

Go online and complete the survey: http://bit.ly/gamblingsurvey1

By completing this survey, you will go into a draw to win one of six $50 retail vouchers.

For more information, email Rachel Bush: rachel.bush@deakin.edu.au

This project has been approved by the Deakin University Human Research Ethics Committee (ref: 2018-366) and the Thorne Harbour Health Community Research Endorsement Panel (ref: THH/CREP/19/002).

Deakin University CRICOS Provider Code: 001138

Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1 | Survey link: bit.ly/gamblingsurvey1

Appendix C – General flyer and poster

Note that the advertisements used the phrase “do you gamble?” to let people know we were recruiting participants for a study about gambling. This phrase was used as it was a simple and concise phrase, however, it is possible that some people may not consider their behaviour (e.g. buying scratch tickets or lotto) as gambling and therefore did not participate in the survey.

DO YOU GAMBLE?

We want to know about your experiences with gambling and in particular, in situations where you sometimes gamble more than you intend or like to.

If you are aged 18 or over and are a resident of Australia, you are invited to join this study.

Go online and complete the survey: http://bit.ly/gamblingsurvey1

By completing this survey, you will go into a draw to win one of six $50 retail vouchers.

For more information, email Rachel Bush: rachel.bush@deakin.edu.au

This study has been approved by the Deakin University Human Research Ethics Committee (Reference number: 2018-366).

Deakin University CRICOS Provider Code: 00113B

DO YOU GAMBLE?

We want to know about your experiences with gambling and in particular, in situations where you sometimes gamble more than you intend or like to.

If you are aged 18 or over and are a resident of Australia, you are invited to join this study.

Go online and complete the survey: http://bit.ly/gamblingsurvey1

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Deakin University CRICOS Provider Code: 00113B

Survey link: bit.ly/gamblingsurvey1
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Appendix D – Survey instrument

Examining Risk and Protective Factors for the Development of Gambling-Related Harms and Problems

Do you gamble? Are you at least 18 years old and living in Australia?

If so, you are invited to participate in this study.

Study purpose: This study is about the factors that contribute to, or stop people from gambling. We are particularly interested in understanding the degree of problem gambling in the LGBTIQ+ community and exploring the experiences of individuals from each subgroup in this community as very little research in this area has been done. We are also interested in hearing from those who identify as heterosexual as it is possible that other factors may contribute to these issues. As yet, we do not know the answers to these questions and we are looking for your confidential participation.

Participation: Your participation in this project is completely voluntary. It will involve completing this online survey which will take approximately 20-30 minutes. The questions in this survey will ask you to reflect on the following themes - gambling behaviour (e.g. Have you spent money on informal private games in the past 12 months?),gambling symptom severity (e.g. Have you felt that you might have a problem with gambling?), harms from gambling (e.g. In the last 12 months, have you experienced a reduction of your savings as a result of your gambling?), mental health (e.g. During the past 30 days, about how often did you feel nervous?), severity of alcohol use (e.g. How often do you have a drink containing alcohol?), drug use (e.g. Have you used drugs other than those required for medical reasons?), resilience (e.g. I tend to bounce back quickly after hard times), social support (e.g. How often is some available to give you good advice about a crisis?), and community connectedness (e.g. You feel you are part of the LGBTIQ+ or mainstream community). LGBTIQ+ participants will also answer a few additional questions about perceived stigma (e.g. Most people where I live would treat a LGBTIQ+ person as they would treat anyone) and discrimination (e.g. In the past 12 months, have you felt discriminated against because of your sexual and/or gender identity?).

This survey will be open until November 30, 2019.

Your decision to participate is entirely voluntary. If you wish to withdraw at any stage, you are free to do so without any disadvantage to yourself. However, please be aware that once you submit your responses, it will not be possible to alter or withdraw them.

By completing this survey, you will go into a draw to win one of six $50 retail vouchers.
At the end of this survey, LGBTIQ+ identified participants will be asked to provide a separate consent to be contacted for an interview to further explore your experiences with gambling. Interviews will be audio-recorded so they can be transcribed for analysis.

Possible risks and benefits: The benefits from participating in this study include having the opportunity to reflect on your own gambling and any factors which may be associated with it. You may also benefit from the satisfaction that your involvement will contribute to developing an understanding of gambling-related severity and harms in the LGBTIQ+ community.

There is a risk that some of the survey questions may cause some discomfort. For example, some questions will ask about gambling-related harms that you might have experienced (e.g. In the last 12 months have you felt ashamed of your gambling), you will be asked questions regarding your mental health and alcohol/drug use, and LGBTIQ+ participants will answer questions about perceived stigma and experiences of discrimination. If you do become upset or distressed as a result of participating in this study, a list of appropriate services has been

provided below. Alternatively, you could contact Rachel Bush rachel.bush@deakin.edu.au for more information about support services.

Research institutions: This project is being conducted by the School of Psychology, Deakin University, and La Trobe University. It has been funded by a grant from the Victorian Responsible Gambling Foundation and approved by the Human Research Ethics Committee of Deakin University.

Further information and where to request a copy of the final report: The Principal Researcher of this project is Rachel Bush. For further information about this study or to request a copy of the report, please contact Rachel Bush rachel.bush@deakin.edu.au

Ethics inquiries: If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact the Manager, Ethics and Biosafety, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, research-ethics@deakin.edu.au (Ref: 2018-366).

Support: If participation in this project brings up experiences that have been distressing or leads to further questions about the topics covered, you can also try discussing your concerns by contacting any of the following organisations listed below. Alternatively, you can download the list of services attached at the end of this page.

QLife: Australia's national counselling and referral service for people who are lesbian, gay, bisexual, trans, and/or intersex (www.qlife.org.au) – 1800 184 527 (3pm-12am)

Queerspace: Counselling and advocacy for LGBTIQ+ youth (www.queerspace.org.au/our-services/counselling)

Lifeline: (www.lifeline.org.au) – 13 11 14 (24hrs)

BeyondBlue: (www.beyondblue.org.au) - Phone (07) 5442 4277 / 0407 766 961 (24hrs)

Additional State-Based Services

ACT: See QLife

NSW: ACON Counselling Services (www.acon.org.au/who-we-are-here-for/) (please see website for further details)

NT: Northern Territory AIDS & Hepatitis Council (www.ntahc.org.au) - 08 8944 7777 (9am-5pm)

QLD: See QLife

SA: Bfriend (www.sacommunity.org/org/202240-Bfriend) - 08 8202 5190 (9am-5pm)

Tas: Gay & Lesbian Switchboard (www.switchboard.org.au) - 1800 184 527 (3pm-12am)

Vic: Gay & Lesbian Switchboard (www.switchboard.org.au) - 03 9663 2939 or 1800 184 527 (3pm-12am)

WA: See QLife

Do you consent to participate in this study?

- ◯ Yes
- ◯ No

If you would like to go into the draw to win one of six $50 retail vouchers, please enter your email address below:

_____

ABOUT YOU

Please provide us with some details about yourself.

What is your age?

_____

In which country do you currently live?

- ◯ Australia
- ◯ Other (please specify) _____

In which state do you live?

- ◯ Australian Capital Territory
- ◯ New South Wales
- ◯ Victoria
- ◯ Queensland
- ◯ South Australia
- ◯ Western Australia
- ◯ Tasmania
- ◯ Northern Territory

Where do you currently live?

- ◯ Inner urban (within 5 km of city centre)
- ◯ Outer urban
- ◯ Regional centre (population 50,000 or more)
- ◯ Rural area (population 5000-50,000)
- ◯ Rural area (population less than 5,000)

Are you of Aboriginal or Torres Strait Islander origin?

- ◯ Yes, Aboriginal
- ◯ Yes, Torres Straight Islander
- ◯ No
- ◯ Do not wish to say

What is your country of birth?

_____

With which ethnic cultural group do you identify?

_____

Which of the following best describes your current gender identity? (please select all that apply)

- ◯ Male
- ◯ Female
- ◯ Transgender female/transgender woman
- ◯ Transgender male/transgender man
- ◯ Non-binary/gender fluid
- ◯ Agender
- ◯ Other (please describe) _____

What gender were you assigned at birth (i.e. what was specified on your original birth certificate)?

- ◯ Male
- ◯ Female

Were you born with a variation of sex characteristics? (this is sometimes called ‘intersex’)

- ◯ Yes
- ◯ No
- ◯ Prefer not to answer

Do you consider yourself to be:

- ◯ Lesbian
- ◯ Gay
- ◯ Bisexual
- ◯ Queer
- ◯ Pansexual
- ◯ Asexual
- ◯ Heterosexual/straight
- ◯ Other (please specify) _____

Which of the following best describes who you are sexually attracted to? (Please select all that apply)

- ◯ Women
- ◯ Men
- ◯ Non-binary/gender fluid individuals
- ◯ Different identity (please specify) _____

Who lives with you? (Choose as many as apply)

- ◯ Live alone
- ◯ Partner
- ◯ Children
- ◯ Parents or other relatives
- ◯ Housemate/s
- ◯ Friend/s
- ◯ Other (please specify): _____

Are you currently in a relationship?

- ◯ Yes, with one person
- ◯ Yes, with more than one person
- ◯ No

Are you in a relationship with:

- ◯ A woman
- ◯ A man
- ◯ A transgender woman
- ◯ A transgender man
- ◯ Non-binary individual
- ◯ Other (please specify): _____

What are the gender identities of your partners?

_____

What are the sexual orientations of your partners?

_____

Is your partner/s your primary source of emotional support?

- ◯ Yes
- ◯ No

What is your highest level of education?

- ◯ Still at secondary school
- ◯ Did not attend primary or secondary school
- ◯ Attended primary school only
- ◯ Attended secondary school but did not complete year 12
- ◯ Completed secondary school to end of year 12
- ◯ Completed a trade apprenticeship or traineeship
- ◯ Completed a diploma
- ◯ Completed a university undergraduate degree
- ◯ Completed a higher degree (e.g. Masters / Doctorate)
- ◯ Other (please specify) _____

Which of the following best describes your current occupational status?

- ◯ A part-time wage or salary earner
- ◯ A full-time wage or salary earner
- ◯ Working unpaid (including home duties)
- ◯ Unemployed, seeking work
- ◯ Unemployed, not seeking work
- ◯ None of these

GAMBLING BEHAVIOUR

We would like to ask you some questions about gambling.

On which of the following activities have you spent any money in the past 12 months?

- ◯ Informal private games for money – e.g. cards, mah-jong, snooker, online or offline computer games, board games, sports.
- ◯ Playing pokies or electronic gaming machines.
- ◯ Betting on casino table games like blackjack, roulette and poker.
- ◯ Betting on horse or harness racing or greyhounds - including any bets at the Melbourne Cup, Spring Racing or on Trackside virtual racing, but excluding all sweeps.
- ◯ Betting on sports – e.g. AFL or cricket, but excluding fantasy sports and novelty events.
- ◯ Betting on events including for instance, election results, current affairs and TV shows.
- ◯ Keno.
- ◯ Lotto, Powerball or the Pools.
- ◯ Instant scratch tickets.
- ◯ Bingo.

How often on average did you bet on informal private games for money in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don’t know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH SESSION of betting on informal private games for money?By SPEND we mean the difference between what you took with you (including any additional money withdrawn or borrowed during the period of betting) and what you had left when you finished.

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money playing pokies or electronic gaming machines in the past 12 months. Did you play pokies at (please select all that apply):

- ◯ In a club or hotel
- ◯ In a casino
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)
- ◯ Over the Internet using a desktop computer

How often on average did you take part in pokies and electronic gaming machines in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND on poker machines during EACH VISIT to a poker machine venue? By SPEND we mean the difference between what you took with you (including any additional money withdrawn or borrowed during the period of play) and what you had left when you finished playing.

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money betting on casino table games like blackjack, roulette and poker in the past 12 months.

Did you place your bets at (please select all that apply):

- ◯ At a casino
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)
- ◯ Over the Internet using a desktop computer

How often on average did you bet on casino table games like blackjack, roulette and poker in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH SESSION you played casino table games? By SPEND we mean the difference between what you took with you (including any additional money withdrawn or borrowed during the period of betting) and what you had left when you finished.

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money betting on horse or harness racing or greyhounds in the past 12 months. Did you place your bets at (please select all that apply):

- ◯ At a racetrack
- ◯ At an off-course venue (such as UBET/TOTE/TAB, club, hotel or casino)
- ◯ By telephone or SMS (mobile phone or landline)
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)
- ◯ Over the Internet using a desktop computer

How often on average did you place your bets? This refers to the number of sessions of betting not number of individual bets placed.

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, approximately how much money, ON AVERAGE, did you spend during EACH SESSION of betting on horse or greyhound races? By SPEND we mean the difference between what you took with you (including any additional money withdrawn or borrowed during the period of betting) and what you had left when you finished.

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money betting on sports in the past 12 months. Did you place your bets at (please select all that apply):

- ◯ At an off-course venue (such as UBET/TOTE/TAB, club, hotel or casino)
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or ipad)
- ◯ Over the Internet using a desktop computer
- ◯ By telephone or SMS (landline or mobile phone)

How often on average did you place bets on sports in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH SESSION of betting on sports?

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money betting on other events in the past 12 months. Did you place your bets at (please select all that apply):

- ◯ At an off-course venue (such as UBET/TOTE/TAB, club, hotel or casino)
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or ipad)
- ◯ Over the Internet using a desktop computer
- ◯ By telephone or SMS (landline or mobile phone)

How often on average did you place bets on other events in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

I

n the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH SESSION of betting on other events?

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money on keno in the past 12 months. Where did you play keno (please select all that apply):

- ◯ In a club or hotel; In a casino
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)
- ◯ Over the Internet using a desktop computer

How often on average did you take part in keno in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, how much money, on AVERAGE, did you SPEND during EACH SESSION of playing Keno? By SPEND we mean the difference between what you took with you (including any additional money withdrawn or borrowed during the period of betting) and what you had left when you finished.

- ◯ $ _____
- ◯ Don't know

You answered that you have spent money on lotto, Powerball or the Pools in the past 12 months. Where did you play (please select all that apply):

- ◯ In a newsagent or Tattersall's outlet
- ◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)
- ◯ Over the Internet using a desktop computer

How often on average did you take part in the past 12 months?

- ◯ Times per week _____
- ◯ Times per month _____
- ◯ Times per year _____
- ◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH TRANSACTION of playing a lottery?

◯ $ _____

◯ Don't know

You answered that you have spent money on scratch tickets in the past 12 months. Where did you purchase the instant scratch tickets (please select all that apply):

In a newsagent or Tattersall's outlet

Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)

Over the Internet using a desktop computer

How often on average did you purchase instant scratch tickets in the past 12 months?

◯ Times per week _____

◯ Times per month _____

◯ Times per year _____

◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH TRANSACTION of purchasing instant scratch tickets?

◯ $ _____

◯ Don't know

You answered that you have played bingo in the past 12 months. Where did you play (please select all that apply):

◯ In a club or hall

◯ Over the Internet on a mobile device (website or app on a smartphone, laptop, or iPad)

◯ Over the Internet using a desktop computer

How often on average did you play bingo in the past 12 months?

◯ Times per week _____

◯ Times per month _____

◯ Times per year _____

◯ Don't know

In the past 12 months, how much money, ON AVERAGE, did you SPEND during EACH SESSION of playing bingo?

◯ $ _____

◯ Don't know

Thinking about the last 12 months, how often:

	Almost always	Most of the time	Sometimes	Never
Have you bet more than you could really afford to lose?	◯	◯	◯	◯
Have you needed to gamble with larger amounts of money to get the same feeling of excitement?	◯	◯	◯	◯
Have you gone back another day to try to win back the money you lost?	◯	◯	◯	◯
Have you borrowed money or sold anything to get money to gamble?	◯	◯	◯	◯
Have you felt that you might have a problem with gambling?	◯	◯	◯	◯
Have people criticized your betting or told you that you had a gambling problem, whether or not you thought it was true?	◯	◯	◯	◯
Have you felt guilty about the way you gamble or what happens when you gamble?	◯	◯	◯	◯
Has your gambling caused you any health problems, including stress or anxiety?	◯	◯	◯	◯
Has your gambling caused financial problems for you or your household?	◯	◯	◯	◯

In the last 12 months, have you experienced any of the following issues as a result of your gambling:

	No	Yes
Reduction of your available spending money	◯	◯
Reduction of your savings	◯	◯
Less spending on recreational expenses such as eating out, going to movies or other entertainment	◯	◯
Had regrets that made you feel sorry about your gambling	◯	◯
Felt ashamed of your gambling	◯	◯

	No	Yes
Sold personal items	◯	◯
Increased credit card debt	◯	◯
Spent less time with people you care about	◯	◯
Felt distressed about your gambling	◯	◯
Felt like a failure	◯	◯

GAMBLING RELATED THOUGHTS AND EXPECTATIONS

We would like to know about your thoughts and expectations about gambling.

Please indicate the extent to which you agree with the value expressed in each statement.

	Strongly disagree	Moderately disagree	Mildly disagree	Neither agree or disagree	Mildly agree	Moderately agree
Gambling makes me happier.	◯	◯	◯	◯	◯	◯
I can't function without gambling.	◯	◯	◯	◯	◯	◯
Praying helps me win.	◯	◯	◯	◯	◯	◯
Losses when gambling, are bound to be followed by a series of wins.	◯	◯	◯	◯	◯	◯
Relating my winnings to my skill and ability makes me continue gambling.	◯	◯	◯	◯	◯	◯
Gambling makes things seem better.	◯	◯	◯	◯	◯	◯
It is difficult to stop gambling as I am so out of control.	◯	◯	◯	◯	◯	◯
Specific numbers and colours can help increase my chances of winning.	◯	◯	◯	◯	◯	◯
A series of losses will provide me with a learning experience that will help me win later.	◯	◯	◯	◯	◯	◯

	Strongly disagree	Moderately disagree	Mildly disagree	Neither agree or disagree	Mildly agree	Moderately agree
Relating my losses to bad luck and bad circumstances makes me continue gambling.	◯	◯	◯	◯	◯	◯
Gambling makes the future brighter.	◯	◯	◯	◯	◯	◯
My desire to gamble is so overpowering.	◯	◯	◯	◯	◯	◯
I collect specific objects that help increase my chances of winning.	◯	◯	◯	◯	◯	◯
When I have a win once, I will definitely win again.	◯	◯	◯	◯	◯	◯
Relating my losses to probability makes me continue gambling.	◯	◯	◯	◯	◯	◯
Having a gamble helps reduce tension and stress.	◯	◯	◯	◯	◯	◯
I'm not strong enough to stop gambling.	◯	◯	◯	◯	◯	◯
I have specific rituals and behaviours that increase my chances of winning.	◯	◯	◯	◯	◯	◯
There are times that I feel lucky and thus, gamble those times only.	◯	◯	◯	◯	◯	◯
Remembering how much money I won last time makes me continue gambling.	◯	◯	◯	◯	◯	◯
I will never be able to stop gambling.	◯	◯	◯	◯	◯	◯
I have some control over predicting my gambling wins.	◯	◯	◯	◯	◯	◯
If I keep changing my numbers, I have less chances of winning than if I keep the same numbers every time.	◯	◯	◯	◯	◯	◯

Please read each statement below and select the likelihood of each outcome when you are gambling.

	No chance	Very unlikely	Unlikely	Neither likely nor unlikely	Likely	Very likely
I have fun.	◯	◯	◯	◯	◯	◯
I feel more relaxed.	◯	◯	◯	◯	◯	◯
I stop being bored.	◯	◯	◯	◯	◯	◯
I feel excited.	◯	◯	◯	◯	◯	◯
I spend time with people I like.	◯	◯	◯	◯	◯	◯
I feel a rush.	◯	◯	◯	◯	◯	◯
I enjoy myself.	◯	◯	◯	◯	◯	◯
I have a good time.	◯	◯	◯	◯	◯	◯
I only want to spend time with people who gamble.	◯	◯	◯	◯	◯	◯
I feel like gambling all of the time.	◯	◯	◯	◯	◯	◯
I want to gamble more and more.	◯	◯	◯	◯	◯	◯
I get hooked.	◯	◯	◯	◯	◯	◯
I'm not able to stop.	◯	◯	◯	◯	◯	◯
My friends and classmates think I'm cool.	◯	◯	◯	◯	◯	◯
I feel powerful.	◯	◯	◯	◯	◯	◯
I feel in control.	◯	◯	◯	◯	◯	◯
I'm more accepted by people.	◯	◯	◯	◯	◯	◯
I feel guilty.	◯	◯	◯	◯	◯	◯
I feel as if I'm in over my head.	◯	◯	◯	◯	◯	◯
I feel ashamed of myself.	◯	◯	◯	◯	◯	◯
I make a profit.	◯	◯	◯	◯	◯	◯
I win money.	◯	◯	◯	◯	◯	◯
I get rich.	◯	◯	◯	◯	◯	◯

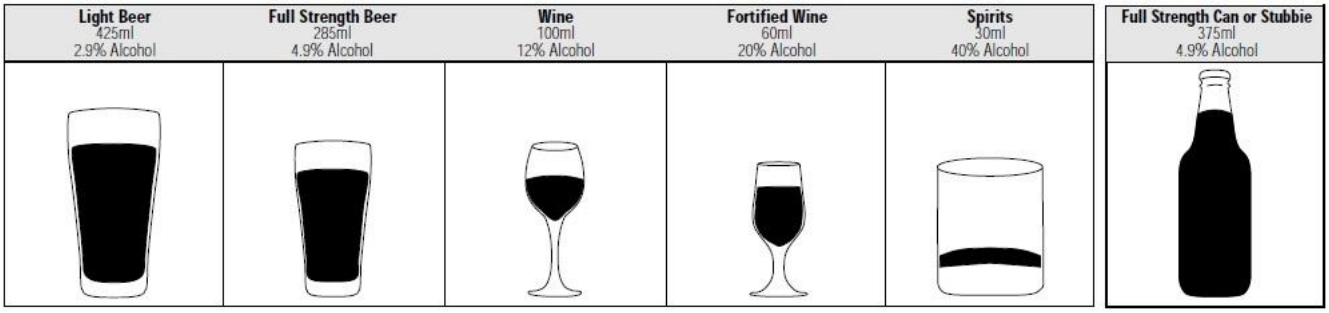
In the past year (12 months), how many of your close friends have gambled?

None of my friends

- ◯ 1 of my friends
- ◯ 2 of my friends
- ◯ 3 of my friends
- ◯ 4 of my friends

ALCOHOL AND DRUG USE

Please select the response that best fits your drinking. Try to answer the questions in terms of 'standard drinks'.



How often do you have a drink containing alcohol?

- ◯ Never
- ◯ Monthly or less
- ◯ 2 - 4 times a month
- ◯ 2 - 3 times a week
- ◯ 4 or more times a week

How many standard drinks do you have on a typical day when you are drinking?

- ◯ 1 or 2
- ◯ 3 or 4
- ◯ 5 or 6
- ◯ 7 to 9
- ◯ 10 or more

How often do you have six or more drinks on one occasion?

- ◯ Never
- ◯ Less than monthly
- ◯ Monthly
- ◯ Weekly
- ◯ Daily or almost daily

How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?

Below are a number of statements that describe ways in which people act and think. For each statement, please indicate how much you agree or disagree with the statement.

	Strongly agree	Agree some	Disagree some	Disagree strongly
I have trouble controlling my impulses.	◯	◯	◯	◯
I have trouble resisting my cravings (for food, cigarettes, etc.).	◯	◯	◯	◯
I often get involved in things I later wish I could get out of.	◯	◯	◯	◯
When I feel bad, I will often do things I later regret in order to make myself feel better now.	◯	◯	◯	◯
Sometimes when I feel bad, I can't seem to stop what I am doing even though it is making me feel worse.	◯	◯	◯	◯
When I am upset I often act without thinking	◯	◯	◯	◯
When I feel rejected, I will often say things that I later regret.	◯	◯	◯	◯
It is hard for me to resist acting on my feelings.	◯	◯	◯	◯
I often make matters worse because I act without thinking when I am upset.	◯	◯	◯	◯
In the heat of an argument, I will often say things that I later regret.	◯	◯	◯	◯
I always keep my feelings under control.	◯	◯	◯	◯
Sometimes I do impulsive things that I later regret.	◯	◯	◯	◯

MENTAL HEALTH

We would like to know about your mental health and ability to cope with stress.

Please indicate the extent to which you agree with the following statements.

	Strongly disagree	Disagree	Neutral	Agree
I tend to bounce back quickly after hard times	◯	◯	◯	◯
I have a hard time making it through stressful events	◯	◯	◯	◯
It does not take me long to recover from a stressful event	◯	◯	◯	◯
It is hard for me to snap back when something bad happens	◯	◯	◯	◯
I usually come through difficult times with little trouble	◯	◯	◯	◯
I tend to take a long time to get over set-backs in my life	◯	◯	◯	◯

During the past 30 days, about how often did you feel …

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Nervous?	◯	◯	◯	◯	◯
Hopeless?	◯	◯	◯	◯	◯
Restless or fidgety?	◯	◯	◯	◯	◯
So depressed that nothing could cheer you up?	◯	◯	◯	◯	◯
That everything was an effort?	◯	◯	◯	◯	◯
Worthless?	◯	◯	◯	◯	◯

SOCIAL SUPPORT

We would like to know about your connection to your local communities as well as your support system.

People sometimes look to others for companionship, assistance, or other types of support. How often is each of the following kinds of support available to you if you need it?

	None of the time	A little of the time	Some of the times	Most of the time	All of the time
Someone to help you if you are confined to bed	◯	◯	◯	◯	◯
Someone you can count on to listen to you when you need to talk	◯	◯	◯	◯	◯
Someone to give you good advice about a crisis	◯	◯	◯	◯	◯
Someone to take you to the doctor if you need it	◯	◯	◯	◯	◯
Someone who shows you love and affection	◯	◯	◯	◯	◯
Someone to have a good time with	◯	◯	◯	◯	◯
Someone to give you information to help you understand a situation	◯	◯	◯	◯	◯
Someone to confide in or talk to about yourself or your problems	◯	◯	◯	◯	◯
Someone who hugs you	◯	◯	◯	◯	◯
Someone to get together with for relaxation	◯	◯	◯	◯	◯
Someone to prepare your meals if you are unable to do it yourself	◯	◯	◯	◯	◯
Someone whose advice you really want	◯	◯	◯	◯	◯
Someone to do things with to help you get your mind off things	◯	◯	◯	◯	◯
Someone to help with daily chores if you are sick	◯	◯	◯	◯	◯
Someone to share your most private worries and fears with	◯	◯	◯	◯	◯
Someone to turn to for suggestions about how to deal with a personal problem	◯	◯	◯	◯	◯
Someone to do something enjoyable with	◯	◯	◯	◯	◯
Someone who understands your problems	◯	◯	◯	◯	◯
Someone to love and make you feel wanted	◯	◯	◯	◯	◯

Regarding your connections with the mainstream community, please select how much you agree with the statements below.

	Strongly disagree	Disagree	Agree	Strongly agree
You feel you are part of the mainstream community.	◯	◯	◯	◯
Participating in the mainstream community is a positive thing for you.	◯	◯	◯	◯
You feel a bond with the mainstream community.	◯	◯	◯	◯
You are proud of your mainstream community.	◯	◯	◯	◯
It is important for you to be politically active in the mainstream community.	◯	◯	◯	◯
If we work together, people can solve problems in the mainstream community.	◯	◯	◯	◯
You really feel that problems faced by the mainstream community are also your own problems.	◯	◯	◯	◯

Regarding your connections with the LGBTIQ+ community, please select how much you agree with each of the statements below.

	Strongly disagree	Disagree	Agree	Strongly agree
You feel you are part of the LGBTIQ+ community.	◯	◯	◯	◯
Participating in the LGBTIQ+ community is a positive thing for you.	◯	◯	◯	◯
You feel a bond with the LGBTIQ+ community.	◯	◯	◯	◯
You are proud of your LGBTIQ+ community.	◯	◯	◯	◯
It is important for you to be politically active in the LGBTIQ+ community.	◯	◯	◯	◯
If we work together, LGBTIQ+ people can solve problems in the LGBTIQ+ community.	◯	◯	◯	◯
You really feel that problems faced by the LGBTIQ+ community are also your own problems.	◯	◯	◯	◯

We would like to know about your experiences and perceived treatment by others.

Please indicate how much you agree with the following statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Most people where I live believe that LGBTIQ+ people are just as trustworthy as the average heterosexual citizen.	◯	◯	◯	◯	◯
Most employers where I live will hire a LGBTIQ+ person if they are qualified for the job.	◯	◯	◯	◯	◯
Most people where I live feel that identifying as LGBTIQ+ is a sign of personal failure.	◯	◯	◯	◯	◯
Most people where I live would not hire an LGBTIQ+ person to take care of their children.	◯	◯	◯	◯	◯
Most people where I live think less of a person who identifies as LGBTIQ+.	◯	◯	◯	◯	◯
Most people where I live would treat a LGBTIQ+ person as they would treat anyone.	◯	◯	◯	◯	◯
Most people where I live will willingly accept LGBTIQ+ people as a close friend.	◯	◯	◯	◯	◯

Sometimes people feel they are discriminated against or treated badly by other people.

In the past 12 months, have you felt discriminated against because of your sexual and/or gender identity?

◯ Not at all

◯ Not really

◯ Undecided

◯ Somewhat

◯ Very much

FOLLOW-UP INTERVIEW

Please indicate whether you consent to possibly being contacted for an interview about your experiences with gambling. The interview will take about 20-30 minutes and will be conducted over the phone. You will receive a $20 retail voucher to thank you for your time. If you agree, please provide your email address and phone number below so Rachel Bush can contact you to arrange a time.

*Please be aware that this information will not be stored with your survey responses and will not appear with any outcomes from this study.

◯ Yes, I wish to be contacted for an interview.

◯ No, I do not wish to be contacted for an interview.

Phone number:

_____

Email address:

_____

Appendix E – Additional analyses

Skewness statistics before and after log transformations

Table E.1 PGSI scores and SGHS before and after log transformation

	Raw data		Log transformed	
	M (SD)	Skewness	*M (SD)*	Skewness
PGSI	6.9 (7.4)	1.15	1.6 (1.1)	-.11
SGHS	3.5 (3.3)	.55	1.2 (.9)	-.17

Differences in PGSI scores and SGHS scores between the Victorian LGBTIQ+ participants and the other LGBTIQ+ participants

Two independent-samples *t*-tests were conducted to compare the PGSI scores and SGHS scores for the Victorian LGBTIQ+ participants and the LGBTIQ+ participants from the other States and Territories. The results did not reveal a significant difference in PGSI scores for the Victorian LGBTIQ+ participants (M = 4.9, SD = 6.1) and the other LGBTIQ+ participants (M = 5.4, SD = 6.2; t (170) = .14, p = .887, two-tailed). The size of the difference in the means (mean difference = .02, 95% *CI*: -.32 to .36) was small (Cohen's d = .08). The SGHS scores also did not significantly differ between the Victorian LGBTIQ+ participants (M = 2.7, SD = .4) and the other LGBTIQ+ participants (M = 3.3, SD = 3.3, t (170) = 1.19, p = .236, two-tailed). The size of the difference in the means (mean difference = .62, 95% *CI*: -.41 to 1.65) was small (Cohen's d = .22)

The relationship between previous 12-month drug use, and PGSI scores and SGHS scores

Table E.2 Correlations between PGSI scores, SGHS scores, and drug use for the cisgender and heterosexual participants and LGBTIQ+ participants

	Cishet *M (SD)*	1.	2.	3.
LGBTIQ+ *M* (*SD*)	-	5.2 (6.1)	3.1 (3.2)	69 (46.9) ††
1. PGSI[a]	*8.2 (8.1)*	-	.75	.13
2. SGHS[b]	*3.8 (3.4)*	.79	-	.05
3. Drug use (ref = yes) †	72 (39.8)††	.19	.16	-

Note: Correlations for the cishet participants (n = 213) are to the left of and below the diagonal in italics. Correlations for the LGBTIQ+ participants (n = 172) are to the right of and above the diagonal. Cells in bold indicate significant correlations.

†*n* for drug use = 181 for cishet group, 147 for LGBTIQ+ group. ††n (%). *M* = mean. *SD* = standard deviation.

[a]Problem Gambling Severity Index. Score range = 0-27. [b]Short Gambling harms Screen. Score range = 0-10.

Appendix F – Key stakeholder plain language statement and consent form

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participant

Plain Language Statement

Full Project Title: Examining Risk and Protective Factors for the Development of Gambling-Related Harms and Problems

Principal Researcher: Ms Rachel Bush

Associate Researcher(s): A/Prof Nicki Dowling, A/Prof Petra Staiger, Dr Andrea Waling

Introduction

You are invited to participate in a research project to investigate factors that contribute to, or stop people from gambling. We are particularly interested in understanding the degree of problem gambling in the LGBTIQ+ community and exploring the experiences of individuals from each subgroup in this community as very little research in this area has been done.

This study is being conducted at Deakin University in partnership with La Trobe University and is being funded by a grant from the Victorian Responsible Gambling Foundation.

Your involvement

If you agree to participate, you will be interviewed to discuss your experience with or knowledge of gambling in the LGBTIQ+ community, and what factors may influence gambling in this community.

Participation is voluntary

Your participation in this interview is completely voluntary. If you wish to withdraw at any stage, you are free to do so without any disadvantage to yourself. Your decision whether to take part or not will not affect your relationship with the researchers, Deakin University or La Trobe University.

Confidentiality

We intend to protect your anonymity and the confidentiality of your responses as far as we are able. All personal data collected in this study will be de-identified and will be omitted from any publications or presentations.

Once the research has been completed, a brief summary of the findings will be sent to you upon your request. A report of the project will be written up as a final report and presented to the Victorian Responsible Gambling Foundation. The findings from the study will be published in a peer-reviewed journal.

Possible risks and benefits

The risks associated with participating in the interview is expected to be minimal. However, if you become upset or distressed as a result of your participation, you can contact one of the services below:

QLife: Australia's national counselling and referral service for people who are lesbian, gay, bisexual, trans, and/or intersex (www.qlife.org.au) – 1800 184 527 (3pm-12am)

Lifeline: (www.lifeline.org.au) – 13 11 14 (24hrs)

beyondblue: (www.beyondblue.org.au) - Phone (07) 5442 4277 / 0407 766 961 (24hrs)

Additional State-Based Services

ACT: See QLife

NSW: ACON Counselling Services (https://www.acon.org.au/who-we-are-here-for/) (please see website for further details)

NT: Northern Territory AIDS & Hepatitis Council (www.ntahc.org.au) - 08 8944 7777 (9am-5pm)

QLD: See QLife

SA: Bfriend (www.sacommunity.org/org/202240-Bfriend) - 08 8202 5190 (9am-5pm)

Tas: Gay & Lesbian Switchboard (www.switchboard.org.au) - 1800 184 527 (3pm-12am)

Vic: Gay & Lesbian Switchboard (www.switchboard.org.au) - 03 9663 2939 or 1800 184 527 (3pm-12am)

WA: See QLife

You may benefit from the satisfaction that your involvement will contribute to developing an understanding of gambling-related severity and harms in the LGBTIQ+ community.

Complaints

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Manager, Ethics and Biosafety, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, research-ethics@deakin.edu.au

Please quote project number 2018-366.

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participant

Consent Form

Date: 01/08/2019

Full Project Title: Examining Risk and Protective Factors for the Development of Gambling-Related Harms and Problems

Reference Number: 2018-366

I have read and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I understand the interview will be audio-recorded and I understand that audio-files will be stored at Deakin University and will be destroyed after five years.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

Participant's Name (printed) _____

Signature _____ Date _____

Rachel Bush
Research Fellow
School of Psychology, Faculty of Health
Deakin University
Melbourne Burwood Campus, 221 Burwood Highway, Burwood, VIC 3125

rachel.bush@deakin.edu.au

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participant

Withdrawal Consent Form

Date: 01/08/2019

Full Project Title: Examining Risk and Protective Factors for the Development of Gambling-Related Harms and Problems

Reference Number: 2018-366

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Deakin University or La Trobe University.

Participant's Name (printed) _____

Signature _____ Date _____

Please mail or email this form to:

Rachel Bush
Research Fellow
School of Psychology, Faculty of Health
Deakin University
Melbourne Burwood Campus, 221 Burwood Highway, Burwood, VIC 3125

rachel.bush@deakin.edu.au

Appendix G – Interview schedules

Participant Interview schedule

1. Exploring reasons for gambling, how participants perceive their sexual and/gender identity is connected to their gambling, help-seeking, experiences with services, what they would like in a service.
2. Stories, histories and identity in thinking about past and present use of gambling services.

TOPIC	QUESTIONS	FOLLOW UP
BACKGROUND/LIFE HISTORY		
• Gain a sense about a participant's identity • Understand participants' relation to their sexual orientation/gender identity/ intersex variation etc • Understanding the narrative/ trajectory, where they came from	• Tell me your story about what it is like to be a (IDENTITY HERE)? • What are some of the things that have surprised you?	• What were some of the challenges? • What were some of the positive things? • What have your experiences of family been like, including when you were younger? • What have your experiences of relationships been like? • Can you tell me a little about how you identify with regard to sexual orientation, gender identity or other aspects of sexuality and gender? • Can you tell me a little about what life was like for you when growing up as an LGBT or I person and then through your adult years?
GAMBLING BEHAVIOUR		
• Their perceptions of their gambling • What their current gambling is like	• When did you first start gambling? • Do you ever gamble when you don't want to?	• What types of gambling do you most engage in? • What do you enjoy about it? • What do you not like about it?
SEXUAL AND/OR GENDER IDENTITY		
• Their perceptions of how their sexual and/or gender identity impacts their gambling	• Do you feel as though your identity as a (IDENTITY HERE) influences your gambling?	• Does it have an impact on your decisions around stopping gambling or seeking help for your gambling?

TOPIC	QUESTIONS	FOLLOW UP
ACCESS TO FORMAL SUPPORTS		
• Participants' decision-making processes in regard to accessing services • Discrimination experienced informing service use • The barriers or challenges they face in accessing services	• Do you think you need help with your gambling? • Have you accessed support for your gambling? • What have your experiences of gambling services been like? • How open are you with your identity when accessing services?	• Why don't you think you need help or support for your gambling? • How safe do you feel accessing these services? • To what extent do you think your needs as an LGBTIQ person would be met in gambling support services? • Is there anything else that encourages you or discourages you when deciding to use gambling support services? • Prompts: you don't think you have a problem or you don't think it's serious enough for professional help, you think you can manage on your own, concerns of perceived stigma either relating to your gambling or your sexual identity, previous negative experiences, you aren't sure where to go/ you would prefer an LGBTIQ specific services? • What made you decide to tell the provider about your identity (or what made you decide not to tell them)?
REFLEXIVITY		
• Any final remarks	• Do you have any other final remarks/questions?	• Is there anything else that you think should or could be done to help improve or support LGBTIQ people who would like to reduce or stop gambling? • Is there anything you'd like to get out of a gambling service? • Is there anything else you would like to share that we haven't already covered?

Key stakeholder interview schedule

1. Exploring gambling in the LGBTIQ+ community from a health worker's perspective.
2. Find out whether many LGBTIQ+ individuals are seeking support for their gambling or discussing problem gambling with health workers from LGBTIQ+ clinics.

TOPIC	QUESTIONS	FOLLOW UP
BACKGROUND		
• Gain a sense about the participant's experience • Understanding the narrative/ trajectory, where they came from	• Tell me about your experience with working as a (INSERT JOB TITLE)? • Tell me about your story and how you identify?	• What were some of the challenges? • What were some of the positive things? • Have you worked in mainstream clinics before? • If yes, did you see many LGBTIQ+ individuals there and were they less likely to self-disclose? • Can you tell me a little about how you identify with regard to sexual orientation, gender identity or other aspects of sexuality and gender? • How does your sexual orientation/gender identity influence your relationship with patients or clients? Does it make it easier or harder?
GAMBLING BEHAVIOUR		
• Their perceptions of gambling in the LGBTIQ+ community	• Do get a sense that people in the community are gambling at problematic levels? • What factors do you think influence gambling in the community?	• What types of gambling are people most engaging in? • If they don't think there's an issue with gambling – Why do you think people in the community are less likely to gamble at problematic levels?
SEXUAL AND/OR GENDER IDENTITY		
• Their perceptions of how sexual and/or gender identity impacts the gambling of people in the LGBTIQ+ community	• In your experience, do you feel as though people's gender and/or sexual identity influence their gambling?	• Does it have an impact on their decisions around stopping gambling or seeking help for their gambling?
ACCESS TO FORMAL SUPPORTS		
• Decision-making processes in regard to accessing services • Discrimination experienced informing service use • The barriers or challenges that are faced in accessing services	• Have you had any LGBTIQ+ individuals see you for gambling support?	• Do you think people in the community are less likely seek support or admit they are gambling? FOLLOW UP: Why do you think this is? PROMPTS: Do you think it is due to fears of stigma or prejudice? • How safe do you think people feel in the LGBTIQ+ community to access mainstream support services? • What do you think makes LGBTIQ+ people feel safe to access mainstream services and/or self-disclose their sexual orientation? • Do you think the needs of LGBTIQ+ people are being met in gambling support services?

TOPIC	QUESTIONS	FOLLOW UP
REFLEXIVITY		
• Any final remarks	• Do you have any other final remarks/questions?	• Is there anything else that you think should or could be done to help improve or support LGBTIQ people who would like to reduce or stop gambling? • Is there anything else you would like to share that we haven't already covered?

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Online magazine

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Let us know what you'd like to read

If you have ideas for themes or stories for *Inside gambling*, we would love to hear from you.
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RESEARCH REPORT

Examining risk and protective factors for the development of gambling-related harms and problems in Victorian LGBTIQ+ communities

October 2020

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